

S/4 Hana: Automate All your Exchange Rates with Standard Functionality

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SAPinsider
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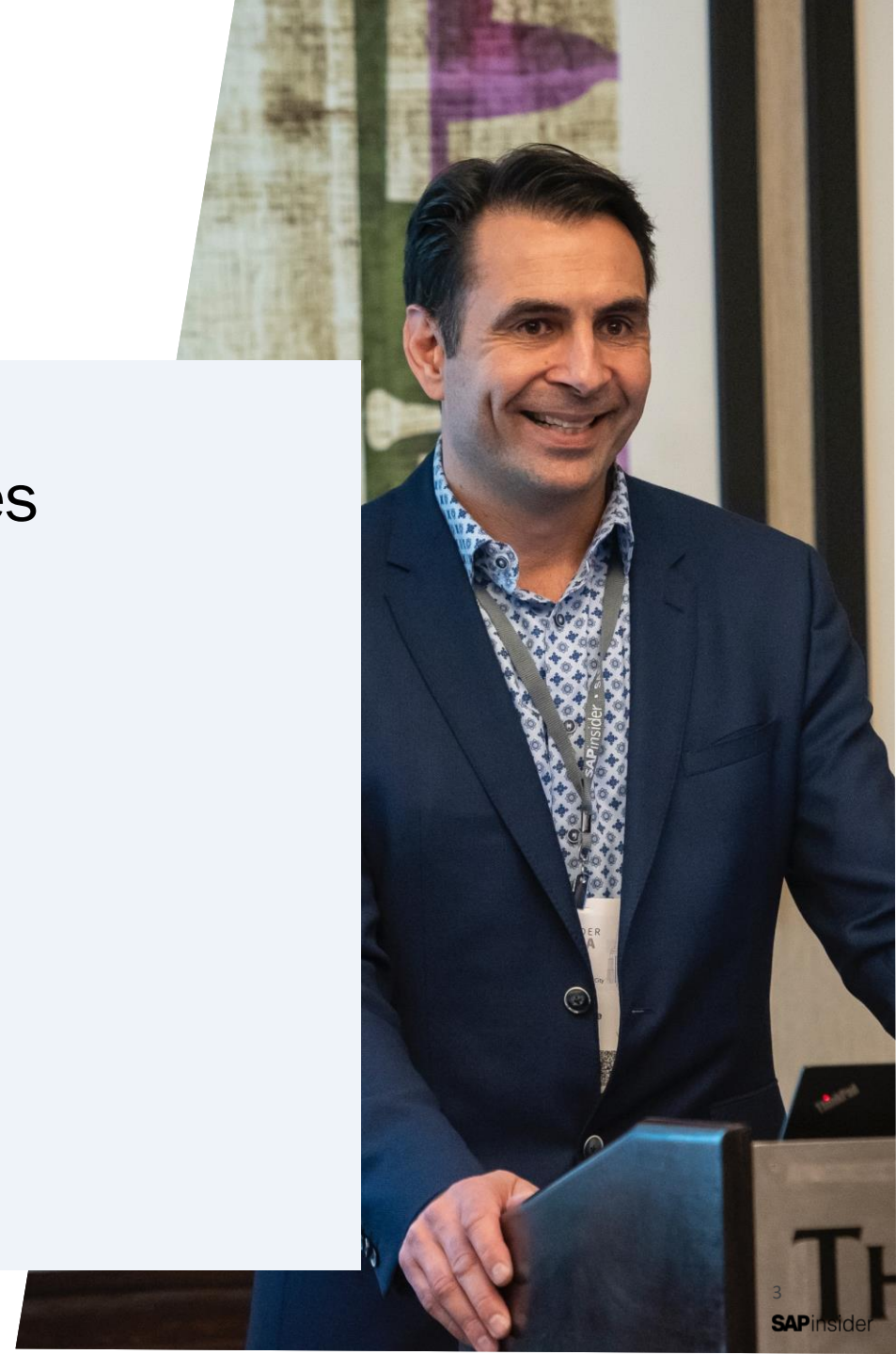


In This Session

- We will see why it is important to update daily the Exchange Rates
- We will see how to fully automate this task with standard SAP functionality
- We will see the basic steps in customizing for this
- We will analyze what you should consider to implement this functionality
- We will explain how this functionality works from the technical side

What We'll Cover

- TBD4 transaction functionalities
- Customizing
- Execution example
- Technical settings
- Wrap-Up



Topic 1

TBD4 Transaction Functionalities



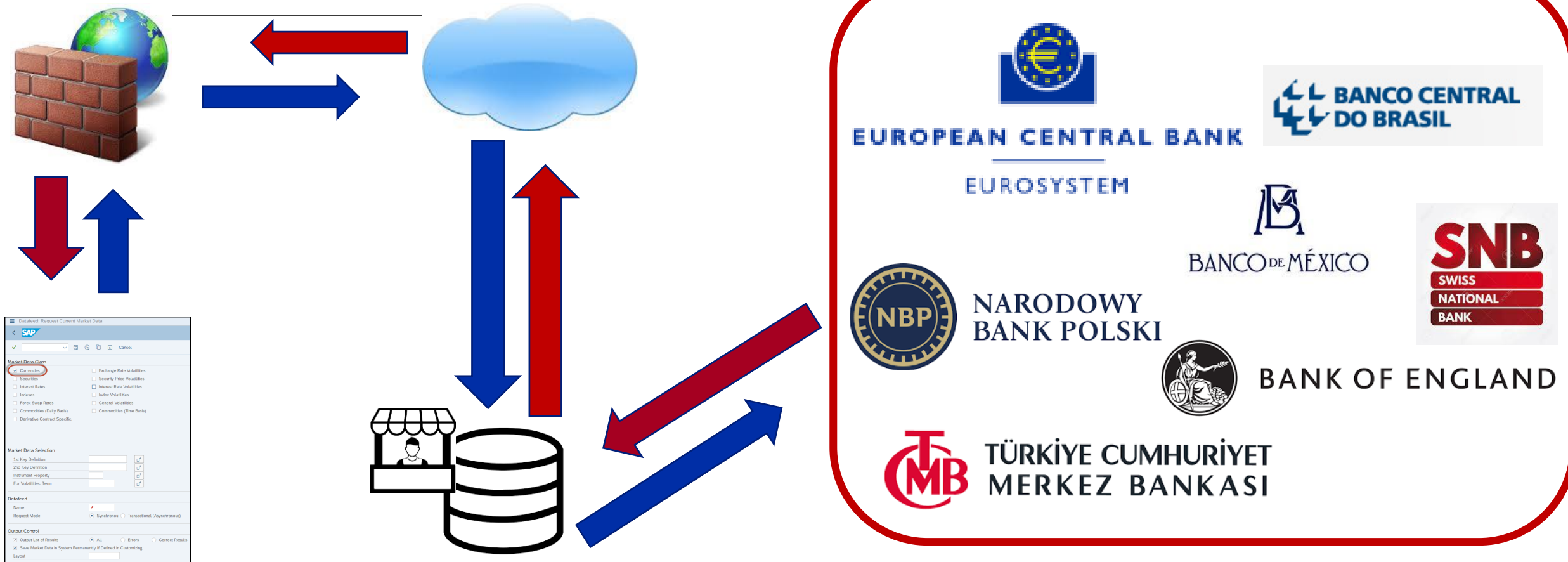
TBD4 Transaction Functionalities

- Importance of having updated Exchange Rates
 - Ways of entering FX rates:
 - Manual way: OB08 transaction
 - Automated way: TBD4 transaction
- TBD4 transaction can update Automatica
 - Exchange Rates
 - Securities
 - Interest Rates
 - Indexes
 - Commodities
 - Several Volatilities
 - Etc.

The screenshot displays the SAP TBD4 transaction interface. At the top, there is a header bar with the SAP logo and a navigation arrow. Below this, a status bar shows a green checkmark, a dropdown menu, and icons for save, refresh, print, and information, along with a 'Cancel' button. The main area is titled 'Market Data Class' and contains a list of checkboxes for selecting data classes: Currencies, Securities, Interest Rates, Indexes, Forex Swap Rates, Commodities (Daily Basis), and Derivative Contract Specific. To the right of this list, there is a separate section with checkboxes for various volatility types: Exchange Rate Volatilities, Security Price Volatilities, Interest Rate Volatilities, Index Volatilities, General Volatilities, and Commodities (Time Basis). At the bottom, there is a section titled 'Market Data Selection' with a field for '1st Key Definition' and a navigation arrow. A small inset window on the left shows a table with columns 'ExRt' and 'Va'.

	ExRt	Va
<input type="checkbox"/>	M	14
<input type="checkbox"/>	M	13
<input type="checkbox"/>	M	09
<input type="checkbox"/>	M	02
<input type="checkbox"/>	M	26

TBD4 Transaction Functionalities



Job for the TBD4 transaction is being executed Automatically and connects to the internet
TBD4 transaction looks for the specific exchange rates at vendor's database
Vendor's database contains the values from the different sources for every currency
TBD4 transaction populates automatically the TCURR table in your SAP system

TBD4 Transaction Functionalities

- Automatically executable by job programmed from SAP for transaction TBD4 (standard transaction)
- Connection time determined by the user
- Standard customizing for the determination of currencies to be processed (Exchange rate type, direct or indirect quotation)

Datafeed: Request Current Market Data

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✓ [] [] [] [] [] Cancel

Market Data Class

☒ Currencies ☐ Exchange Rate Volatilities

☐ Securities ☐ Security Price Volatilities

☐ Interest Rates ☐ Interest Rate Volatilities

☐ Indexes ☐ Index Volatilities

☐ Forex Swap Rates ☐ General Volatilities

☐ Commodities (Daily Basis) ☐ Commodities (Time Basis)

☐ Derivative Contract Specific.

Market Data Selection

1st Key Definition [] []

2nd Key Definition [] []

Instrument Property [] []

For Volatilities: Term [] []

Datafeed

Name [] *

Request Mode ☒ Synchronous ☐ Transactional (Asynchronous)

Output Control

☒ Output List of Results ☒ All ☐ Errors ☐ Correct Results

☒ Save Market Data in System Permanently If Defined in Customizing

Layout []

TBD4 Transaction Functionalities

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Mkt data - 20.09.2022, 14:37:52 o'clock User: USER02

Market data class: 01 Currencies Data source: WAE-Solut

From curr.	To-Currency	Cat	Date	Value
Refresh	UpdateFlag	Status	Warning/error message	
<input type="checkbox"/> ARS	EUR	M	21.09.2022	/144,68760
X	X			
<input type="checkbox"/> ARS	USD	M	21.09.2022	/144,37000
X	X			
<input type="checkbox"/> EUR	ARS	M	21.09.2022	144,68760
X	X			
<input type="checkbox"/> EUR	MXN	M	21.09.2022	19,96670
X	X			
<input type="checkbox"/> EUR	PLN	M	21.09.2022	4,75650
X	X			
<input type="checkbox"/> GBP	USD	M	21.09.2022	/1,14310
X	X			
<input type="checkbox"/> MXN	EUR	M	21.09.2022	/19,96670
X	X			
<input type="checkbox"/> PLN	EUR	M	21.09.2022	/4,75650
X	X			
<input type="checkbox"/> USD	ARS	M	21.09.2022	144,37000
X	X			
<input type="checkbox"/> USD	GBP	M	21.09.2022	/1,14310
X	X			

NBP

Website Central European Bank

Schedule of exchange rates

Buy and sell prices of foreign currencies – table C

Current average exchange rates of foreign currencies in zlotys defined in § 5 of the Resolution No Management Board of the National Bank of Poland of 23 September 2002 on the way of calculating current exchange rates of foreign currencies (Dziennik Urzędowy NBP of 2022 item 10):

Table No. 182/C/NBP/2022 of 2022-09-19 effective from 2022-09-20

Bank of England Database

	Browse data -
South Korean Won	1586.2913
Swedish Krona	12.2771
Swiss Franc	1.1000
Taiwan Dollar	35.7173
Thai Baht	42.1918
Turkish Lira	20.8982
US Dollar	1.1431

Bank of England

TBD4 Transaction Functionalities

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Refresh	UpdateFlag	Status	Warning/error	message	
<input type="checkbox"/> ARS	EUR	M		21.09.2022	/144,68760
X	X				
<input type="checkbox"/> ARS	USD	M		21.09.2022	/144,37000
X	X				
<input type="checkbox"/> EUR	ARS	M		21.09.2022	144,68760
X	X				
<input type="checkbox"/> EUR	MXN	M		21.09.2022	19,96670
X	X				
<input type="checkbox"/> EUR	PLN	M		21.09.2022	4,75650
X	X				
<input type="checkbox"/> GBP	USD	M		21.09.2022	1,14310
X	X				
<input type="checkbox"/> MXN	EUR	M		21.09.2022	/19,96670
X	X				
<input type="checkbox"/> PLN	EUR	M		21.09.2022	/4,75650
X	X				
<input type="checkbox"/> USD	ARS	M		21.09.2022	144,37000
X	X				
<input type="checkbox"/> USD	GBP	M		21.09.2022	/1,14310
X	X				

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	ExRt	ValidFrom	Indir.quot	X	Ratio(from)	From	=	Dir.quot.	X	Ratio (to)	To
<input type="checkbox"/>	M	21.09.2022	144,68760	X		1 ARS	=		X		1 EUR
<input type="checkbox"/>	M	21.09.2022	144,37000	X		1 ARS	=		X		1 USD
<input type="checkbox"/>	M	21.09.2022		X		1 EUR	=	144.68760	X		1 ARS
<input type="checkbox"/>	M	21.09.2022		X		1 EUR	=	19,96670	X		1 MXN
<input type="checkbox"/>	M	21.09.2022		X		1 EUR	=	4,75650	X		1 PLN
<input type="checkbox"/>	M	21.09.2022		X		1 GBP	=	1,14310	X		1 USD
<input type="checkbox"/>	M	21.09.2022	19,96670	X		1 MXN	=		X		1 EUR
<input type="checkbox"/>	M	21.09.2022	4,75650	X		1 PLN	=		X		1 EUR
<input type="checkbox"/>	M	21.09.2022		X		1 USD	=	144,37000	X		1 ARS
<input type="checkbox"/>	M	21.09.2022	1,14310	X		1 USD	=		X		1 GBP

Same Rates in the OB08 Transaction

Topic 2

Customizing



Customizing

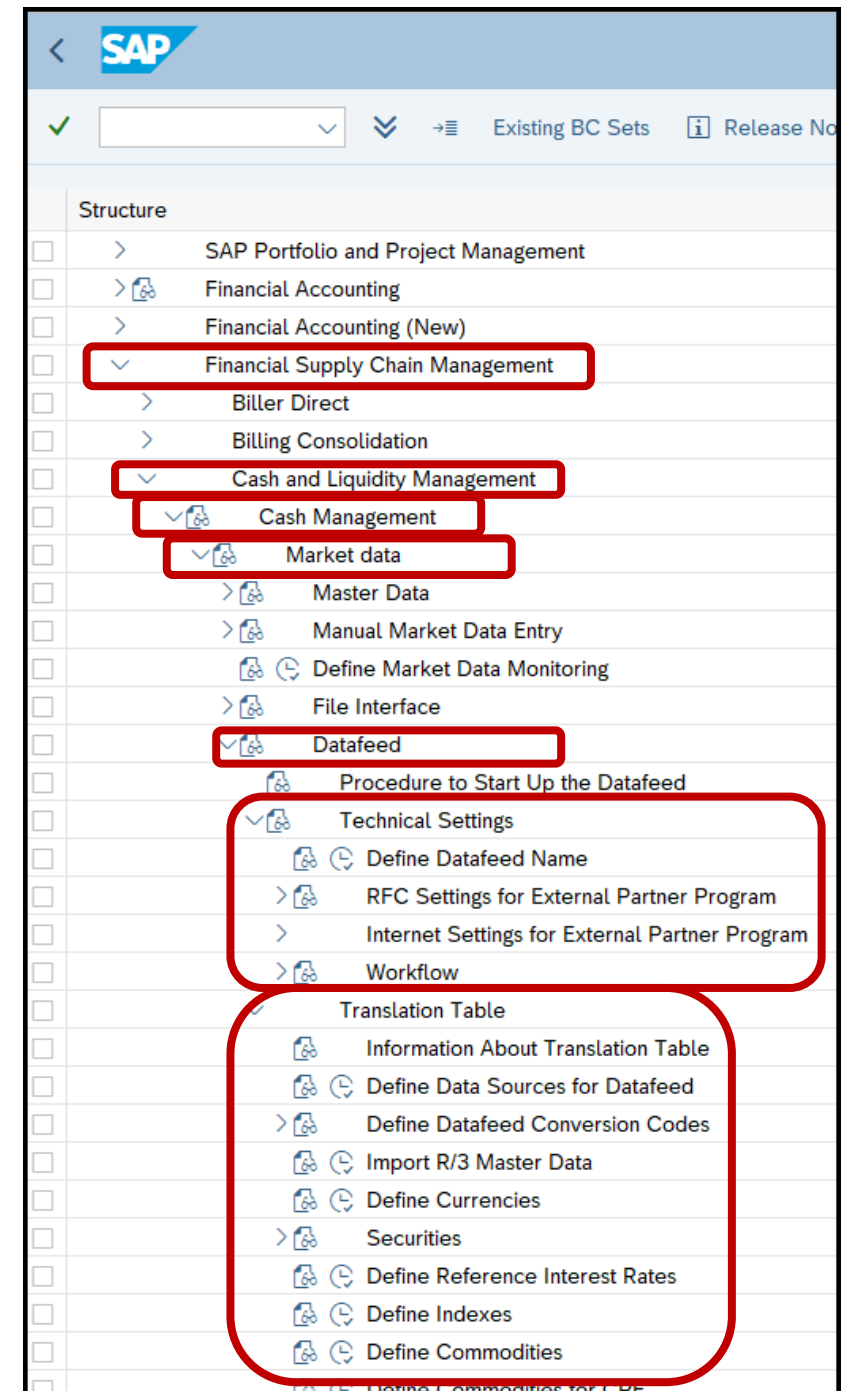
- Very short time (less than 1 hour)
- Prepare first a list of the currencies-combinations to update (useful for the Enduser, Consultant and Vendor)

Exchange Rate Type	From	To	Indirect / Direct	Source	Instrument (To be used by WAE Solutions)
M	BRL	PYG	Direct (second column in OB08)	SET Paraguay - Sale	
M	BRL	USD	Direct (second column in OB08)	Central Bank of Brazil - Sale	
M	EUR	PYG	Direct (second column in OB08)	SET Paraguay - Sale	
M	EUR	USD	Direct (second column in OB08)	Central European Bank	
M	USD	PYG	Direct (second column in OB08)	SET Paraguay - Sale	
M	ARS	CHF	Indirect (first column in OB08)	Central Bank Argentina	
M	ARS	EUR	Indirect (first column in OB08)	Central Bank Argentina	
M	ARS	GBP	Indirect (first column in OB08)	Central Bank Argentina	
M	ARS	USD	Indirect (first column in OB08)	Central Bank Argentina	
M	USD	CHF	Indirect (first column in OB08)	Swiss National Bank	
M	USD	EUR	Indirect (first column in OB08)	Central European Bank	
M	USD	GBP	Indirect (first column in OB08)	Bank of England	

- Ask your vendor for a free trial

Customizing

- General access to customizing:
 - Financial Supply Chain Management
 - Cash and Liquidity Management
 - Cash Management
 - Market Data
 - Datafeed
- Connections and Functions:
 - Technical Settings
- Functional Definitions:
 - Translation Table



Customizing

- Main Settings:
 - Connection (provided by vendor)
 - Currencies definition (based on Exo)

This screenshot shows the top portion of the SAP configuration interface. The header includes the SAP logo and a navigation bar with icons for save, edit, and other actions. Below the header, the 'Data Provider' is set to 'WAE-Solut'. The 'URI' field is highlighted with a blue border and contains the text 'https://www.ob08.net/app/cotizacion/cotizaciones'.

This screenshot shows the 'Administrative Data' and 'Datafeed Parameters' sections of the SAP configuration interface. In the 'Administrative Data' section, 'Crcy Pair' is set to 'EUR' and 'PLN', 'RateType' is 'M', and 'Save market data permanently in system' is checked. The 'Max. deviation in percent' field is highlighted with a blue border and contains the value '2'. In the 'Datafeed Parameters' section, 'Data Provider' is 'WAE-Solut', 'Instrument' is 'NBPVEURPLN=X', 'Data Source' is 'INFOAVAL', 'Property' is 'MAN', and 'Explanation' is 'Bank of Poland EUR Sale'.

This screenshot shows the 'Administrative Data' and 'Datafeed Parameters' sections of the SAP configuration interface. In the 'Administrative Data' section, 'Crcy Pair' is set to 'GBP' and 'USD', 'RateType' is 'M', and 'Save market data permanently in system' is checked. The 'Max. deviation in percent' field is highlighted with a blue border and contains the value '2'. In the 'Datafeed Parameters' section, 'Data Provider' is 'WAE-Solut', 'Instrument' is 'BOECUSDGBP=X', 'Data Source' is 'INFOAVAL', 'Property' is 'MAN', and 'Explanation' is 'Bank of England USD'.

Topic 3

Execution Example



Demonstration



Topic 4

Technical Settings



Technical Settings

- Use of standard SAPHTTP RFC connection
- Communication through HTTP Proxy (if necessary)
- SSL Connection from S/4 to vendor
- Middleware integration

Technical Settings

- Use of standard SAPHTTTPA RFC connection
 - RFC created automatically
 - Possibility to trace execution

```
SAPHTTP Version

[Thr 860] Tue Sep 13 18:02:37 2022
[Thr 860] [4688:860] RfcListenAndDispatch() ended with key=RFC_COMMUNICATION_FAILURE and message=connection closed without message (CM_NO_DATA_RECEIVED)
[Thr 860] Hint: key=RFC_COMMUNICATION_FAILURE and message=CM_NO_DATA_RECEIVED is a standard situation and happens when application server closes the connection.
[Thr 860] [4688] elapsed time 3788320 ms - active time 1750 ms - wait time 1016 ms
[Thr 860] [4688:860] SAPHTTP end

-----
trc file: "dev_http", trc level: 2, release: "749"

[Thr 1680] Mon Sep 19 07:11:32 2022
[Thr 1680] [4336:1680] sccsid: @(#) SId: //bas/749_STACK/src/krn/ftp/httpnw.c#11 $ SAP
[Thr 1680] Unicode
[Thr 1680] Compiled at: Apr 11 2019 562 (PC with Windows NT)
[Thr 1680] Compiled for 64 BIT
[Thr 1680] SAPHTTP patchnumber: 700
[Thr 1680] Current working directory (location of dev_http): C:\usr\sap\EH8\D02\work
```

The screenshot shows the 'Technical Settings' tab of the SAPHTTP configuration window. At the top, there are buttons for 'Connection Test', 'Unicode Test', 'Cancel', and 'More'. Below these, the 'RFC Destination' is set to 'SAPHTTPA' and the 'Connection Type' is 'TCP/IP Connection'. The 'Description' section contains three fields: 'Description 1' with the text 'Automatically Generated on 19991205', and 'Description 2' and 'Description 3' which are empty. At the bottom, there are tabs for 'Administration', 'Technical Settings' (which is selected), 'Logon & Security', 'Unicode', and 'Special Options'. Under the 'Technical Settings' tab, the 'Activation Type' section has three radio buttons: 'Start on Application Server' (which is selected), 'Start on Explicit Host', and 'Registered Server Program'. Below this, the 'Start on Application Server' section has a 'Program' field with the value 'saphttp'.

Technical Settings

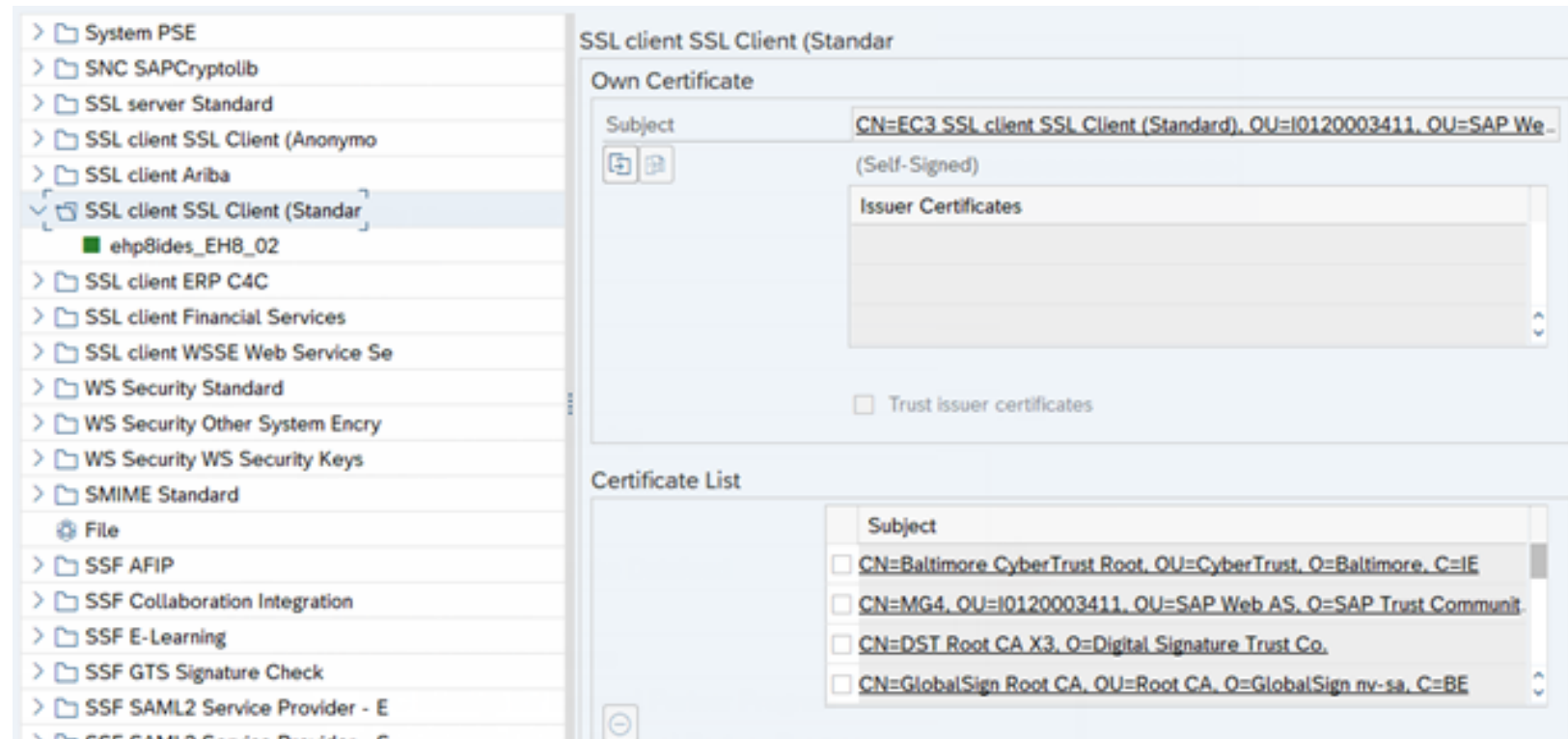
- Communication through HTTP Proxy (if necessary)
 - S/4 Standard Customizing

Proxy	<input type="text" value="proxy:8080"/>
Proxy user	<input type="password" value="....."/>
Proxy password	<input type="password" value="....."/>
Function Module	<input type="text" value=""/>

Structure	
▼	Financial Supply Chain Management
>	Biller Direct
>	Billing Consolidation
▼	Cash and Liquidity Management
▼	Cash Management
▼	Market data
>	Master Data
>	Manual Market Data Entry
	Define Market Data Monitoring
>	File Interface
▼	Datafeed
	Procedure to Start Up the Datafeed
▼	Technical Settings
	Define Datafeed Name
>	RFC Settings for External Partner Program
▼	Internet Settings for External Partner Program
>	HTTP Proxy Configuration
	Define Internet Settings for WEB Server Access

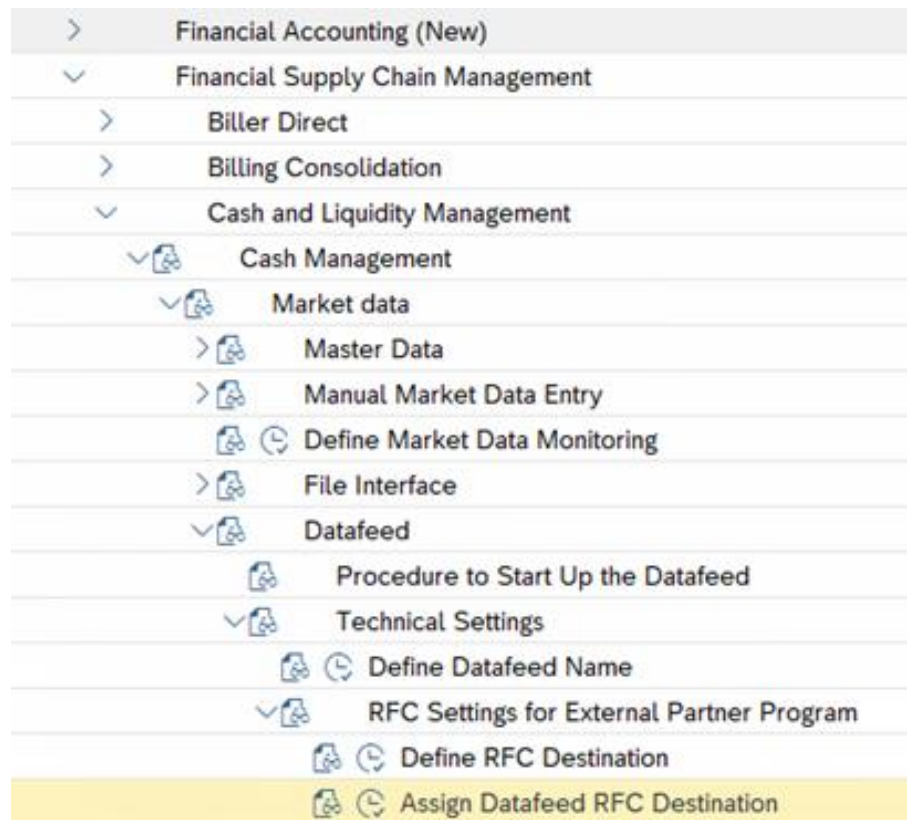
Technical Settings

- SSL Connection from S/4 to vendor
 - STRUST to upload certificate



Technical Settings

- Middleware integration



Data Provider Infoaval

Datafeed: Technical settings external partner program

Mode	Function	RFC destination	B...
<input type="checkbox"/> 1	TB_DATAFEED_INTERNET_ACCESS	NONE	

Wrap Up



OB08 vs. TBD4

Manual Process for 1 currency (OB08)		Automatic Process for ALL currencies (TBD4)	
Activity	Estimated Time	Activity	Estimated Time
Manual access to OB08	5 seconds	Automatic Job Execution for ALL currencies	10 seconds
Access to the bank’s website	5 seconds		
Find currency in the website	10 seconds		
Manual entry in OB08	10 seconds		
30 seconds / currency combination		10 seconds for <u>ALL</u> your currencies	

Summary

Manual Process – OB08	Automatic Process – TBD4
Values are being entered manually, 1 by 1	All values are being entered Automatically, every day
Possibility of involuntary errors	All available values are being populated Automatically
If Keyuser is not available, the values are not populated	Job runs every day, at the same time
There is no standard report in SAP with the specific values for one day	Automatic report with all values is being sent by e-mail, directly from SAP

Where to Find More Information

- SAPinsider: Automate Your Foreign Exchange Rates
<https://sapinsider.org/expert-insights/automate-your-foreign-exchange-rates/>
- SAP Community: Automation of Exchange Rate Feed-in SAP
<https://blogs.sap.com/2020/04/28/automation-of-exchange-rate-feed-in-sap/>
- WAE Solutions – TBD4 Overview
<https://www.waesolutions.com/>
- WAE Solutions – Customizing Document
<https://www.waesolutions.com/resources/pdf/Customizing%20for%20TBD4%20-%20WAE%20Solutions.pdf>
- Additional considerations for setting up SSL on Application Server ABAP – Note 510007
<https://launchpad.support.sap.com/#/notes/510007>

Key Points to Take Home


- Automating Exchange Rates is very easy (and fast)
- Avoid the Risk of entering the rates manually
- Be sure to have updated Exchange Rates in your SAP systems
- Write a list of all the Exchange Rates you would like to Automate
- Explore which is the best Vendor for your needs
- Ask your Vendor for a free trial (30 to 90 days) in your own SAP systems

Thank you! Any Questions?

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your session evaluation.



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