

ACSDA RESULTS ACSDA GENERAL ASSEMBLY

Issuer and Investor Services Survey

April 12th, 2018.











Project Objective



- Consolidate a global and regional view of the issuer and investor services being provided by the CSD community.
- Deliver a summary presentation at WFC 2017
 - Execute a survey within the CSD associations and their members to develop a global view of the CSD issuer services offering



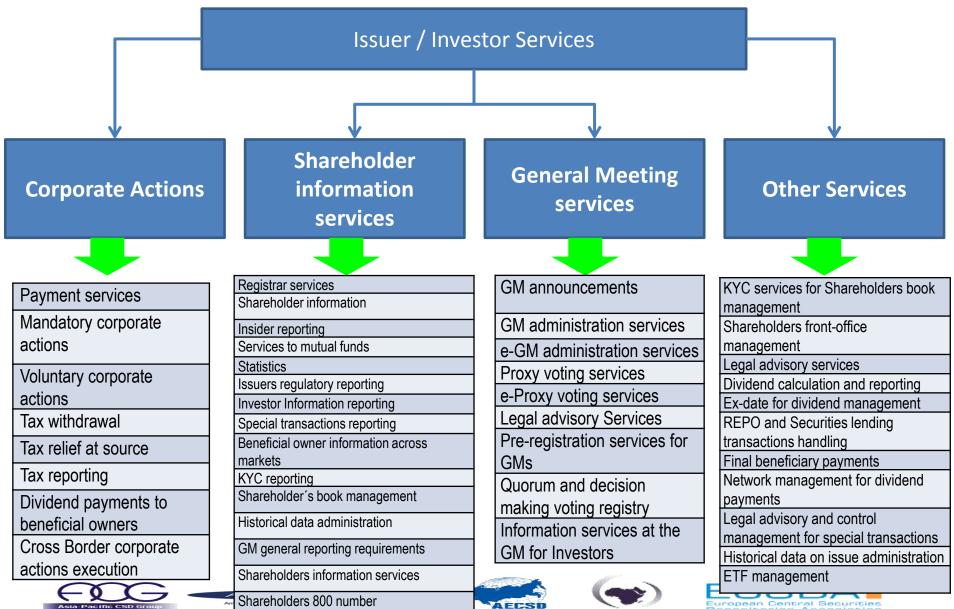




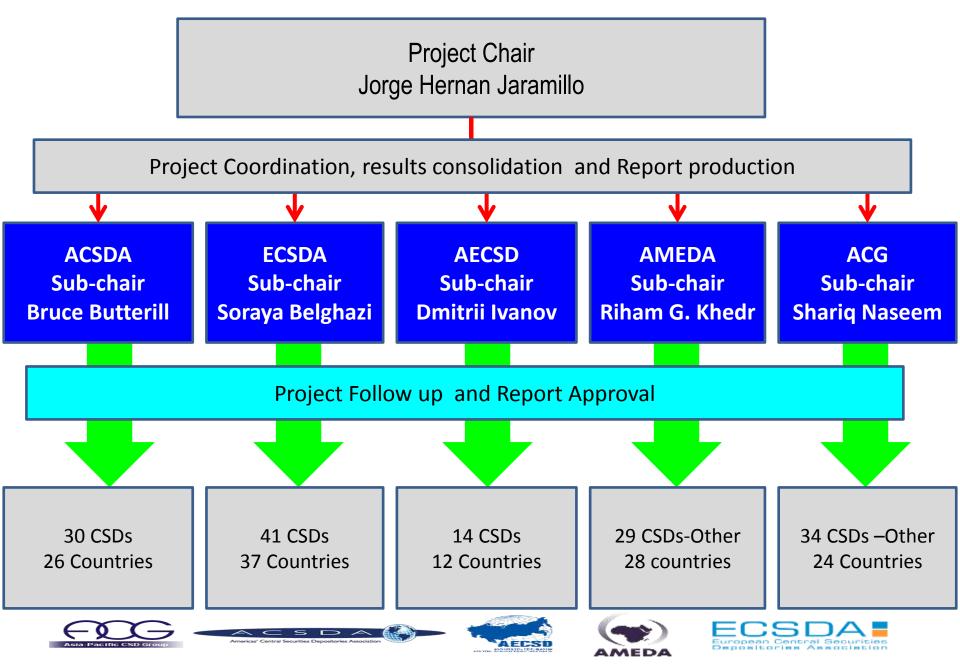








WFC Project Structure – Governance



Questionnaire Respondents

ACSDA (9)	ECSDA (17)	AECSD (9)	AMEDA (8)	ACG (10)
 CDS Canada DTCC USA Indeval Mexico Deceval Colombia DCV Chile Interclear – Costa Rica DCV – BCE – Ecuador Caja de Valores – Argentina Latinclear Panama 	 Central Depository Agency – Montenegro Central Registry of Securities Bosnia and Herzegovina Monte Titoli – Italy Depozitarul Central SA – Romania VP Securities – Denmark Keler – Hungary Iberclear – Spain Euroclear – France, Belgium , Nederlands KDPW – Poland Euroclear Finland CDCP SR – Slovakia Central Depository AD – Bulgaria Cyprus Stock Exchange Euroclear Sweden AB 	 National Settlement Depository - NSD Rusia Central Securities Depository" of the Republic of Uzbekistan (MKK)-CSD of Turkey "Georgian Central Securities Depositary" Central depository of Armenia RUE "Republican Central Securities Depository - Belarus Korea Securities Depository - Belarus Korea Securities Depository - KSD Central Securities Depository - The Republic of Kazakhstan Central Depository Services (India) 	 MidClear Lebanon Strate South Africa Kuwait Clearing Co. MKK Turkey Maroclear Morocco MCDR Egypt Tunisie Clearing Tunisia Dubai Financial Marker - UAE 	 HKSCC – Hong Kong TDCC - Taiwan "Central Securities Depository" of the Republic of Uzbekistan Thailand Securities Depository Co Central Securities Depository -The Republic of Kazakhstan JASDEC - Japan Vietnam Securities Depository CCDC - China Bursa Malaysia Depository Sdn Bhd Korea Securities Depository



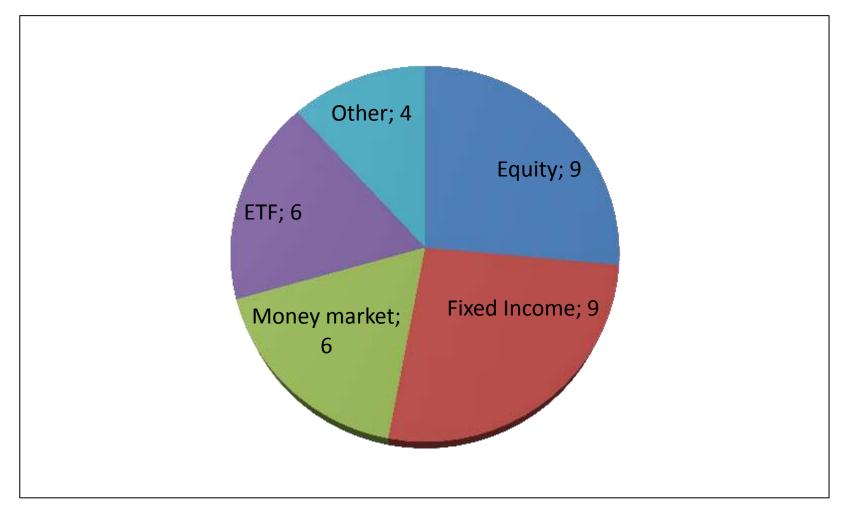






European Central Securities Depositories Association

Securities Type





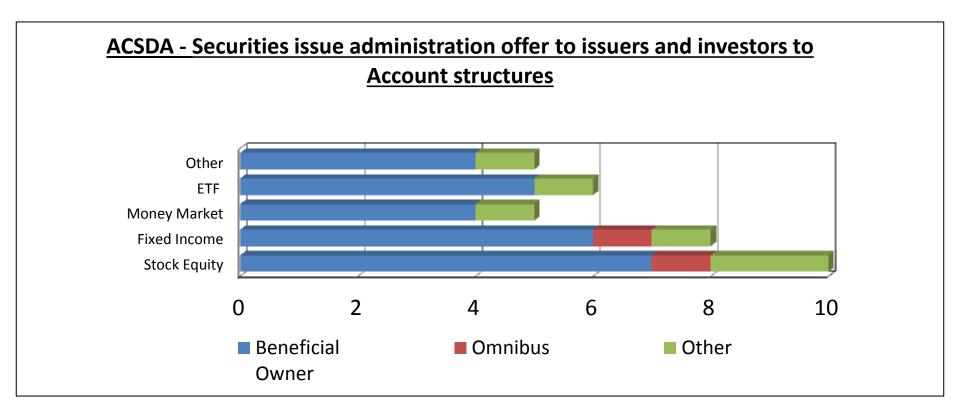








Securities – Account Structures









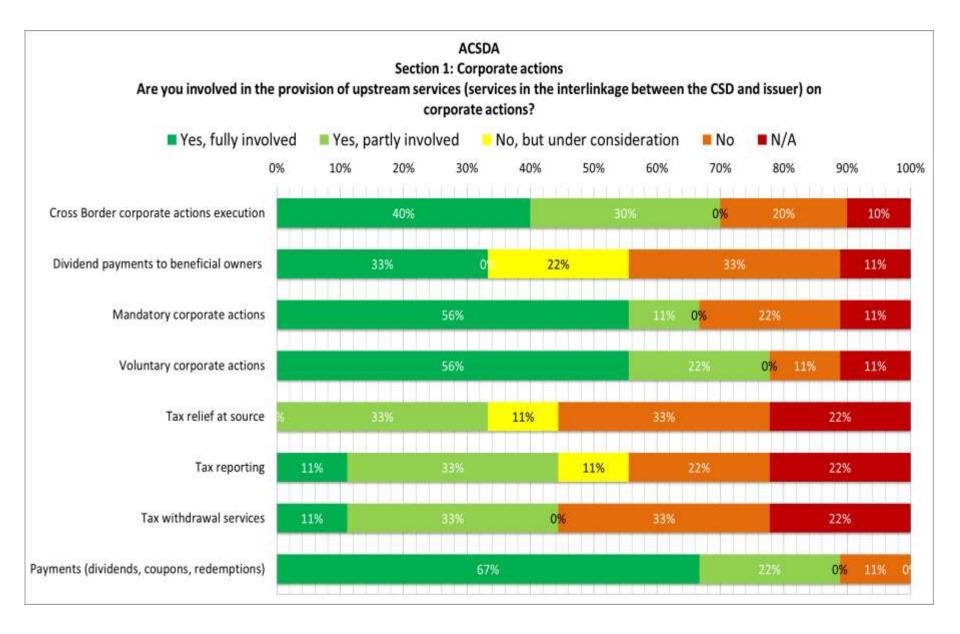












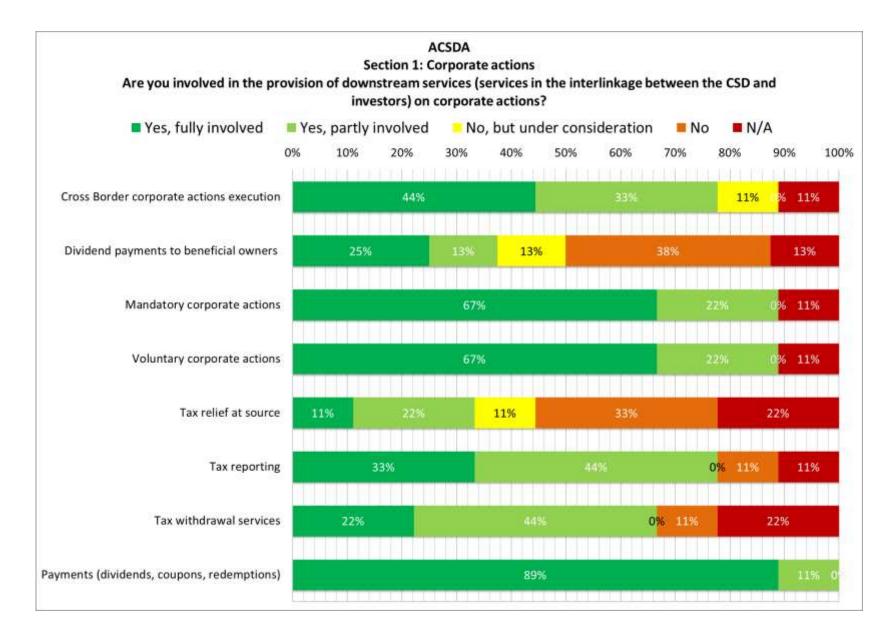












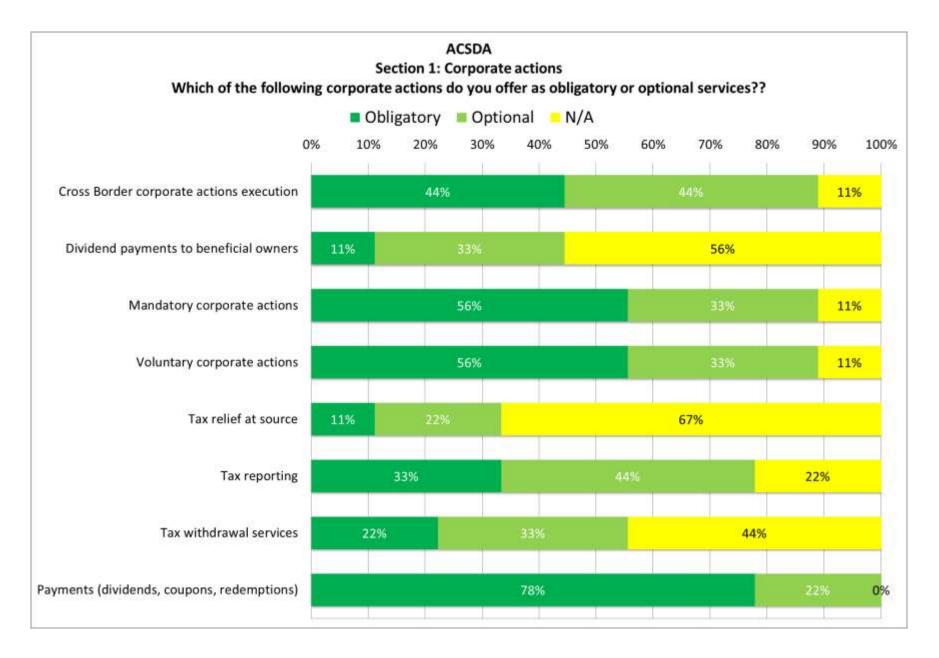












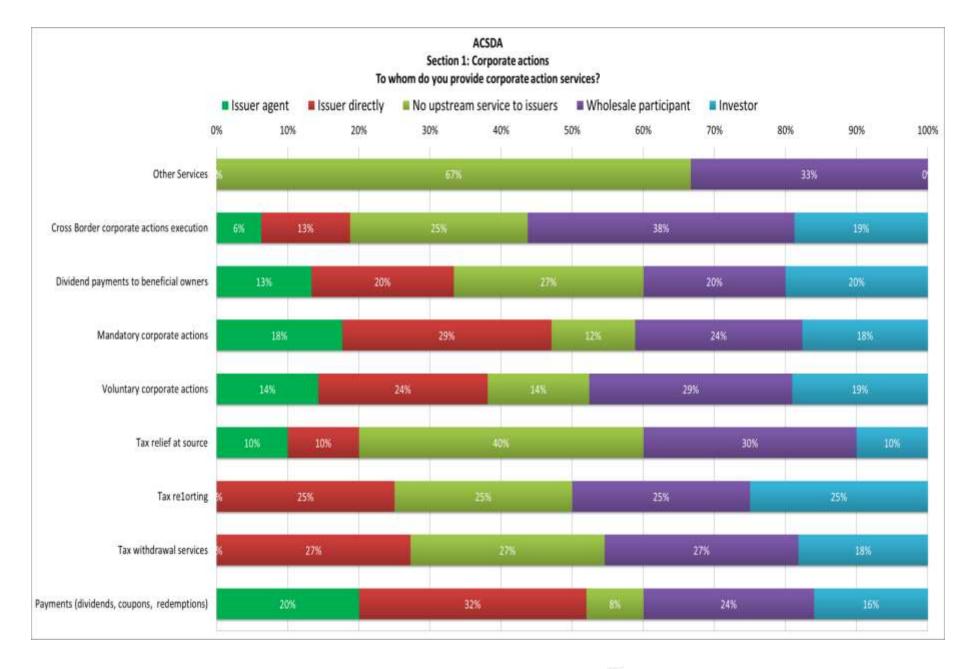












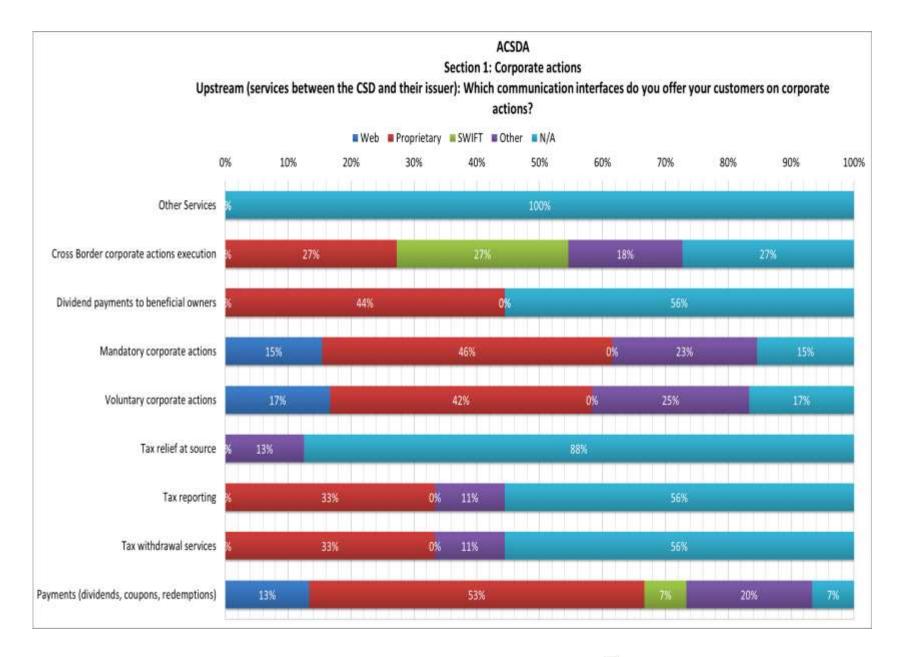












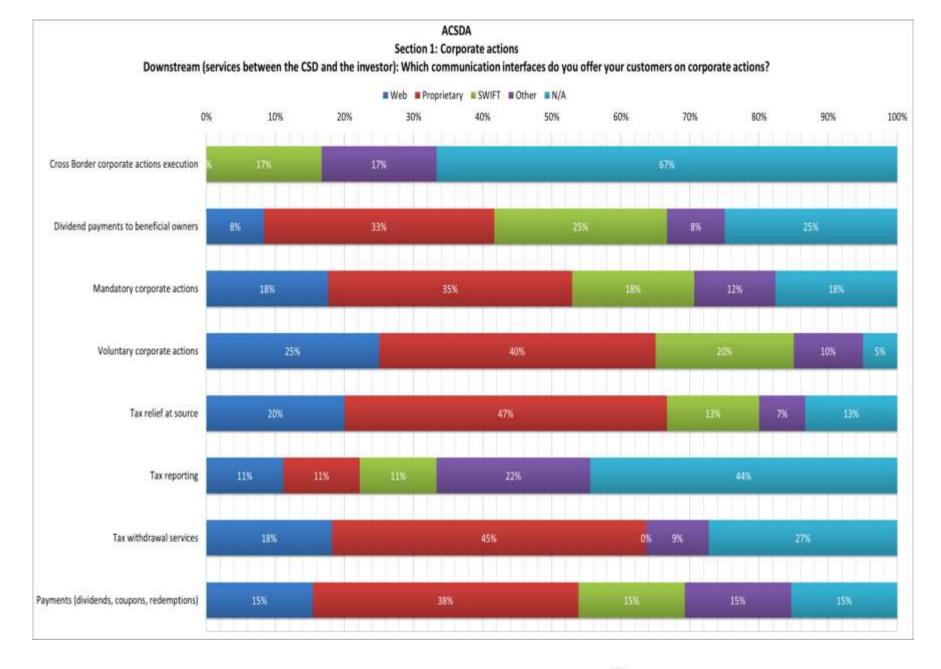
























Issuer / Investor Services

Shareholder information services



Registrar services	
Shareholder information	
Insider reporting	
Services to mutual funds	
Statistics	
Issuers regulatory reporting	
Investor Information reporting	
Special transactions reporting	
Beneficial owner information across markets	
KYC reporting	
Shareholder's book management	
Historical data administration	
GM general reporting requirements	
Shareholders information services	
Shareholders 800 number	





AMEDA

Are you i	nvolved in the provis	ion of upstream s			rmation services	CSD and th	e issuer) on inve	stor informati	ion services?		
		Yes, fully inv	volved a Yes, p	artly involved 💦 🔒 N	o, but under consider	ation No	N/A				
0%	10%	20%	30%	40%	50%		60%	70%	80%	90%	1
Other Services 07	25%						75%				
Shareholders Client Support Service Line	-22%		(116)	11%	Common second		-445				11%
Shareholders information services		BOW		-10% 0%			50%				10%
General Meeting reporting requirements	. 2200		11%	DN			56%				11%
Instruction of the second s											
Historical data administration		33%			22%	0%		335			11%
Shareholder's book management		33%			ns	0%		195			11%
KYC reporting	11%	115. 0%				57					11%
eneficial owner information across markets	22%		4356	11%			445				11%
Special transactions reporting	11%	22N		Dis			56%				11%
Investor Information reporting		33%	_		33%		05	2	22%		11%
issuers regulatory reporting			son		o <mark>x</mark>			38N			13%
Ownership, turnover and holding statistics	25%		C N			618					13%
Provision, calculation of mutual funds 0					TEN.						13%
Tax redemption of mutual funds 0					- Lini						13%
Insider registration and reporting	115 0				78						11%
Investor communication services		44%					315		05 11		11%
Registrar services		38%			255		ON.	25			13%
negister services		-38A		and the second se				4			100























	Wh	ich of following investo		ACSDA stor information rvices do you off		ry or optional ser	vices?			
			Obligator	y 📕 Optional	N/A					
0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100
Shareholders Client Support Service Line	22%					78%				
Shareholders information services	11%	22%					67%			
General Meeting reporting requirements	11%	11%				78%				
Historical data administration		33%				44%			22%	
Shareholder's book management			56%					44%		
KYC reporting	11%	22%					67%			
eneficial owner information across markets	11%	22%					67%			
Special transactions reporting	22%	8				78%				
Investor Information reporting		33%		223	§			44%		
Issuers regulatory reporting		33%		229				44%		
Ownership, turnover and holding statistics	13%	13%				75%				
Provision, calculation of mutual funds					100%					
Tax redemption of mutual funds			1 10 101 1		100%					
Insider registration and reporting					100%					11
Investor communication services	22%				55%				22%	
Registrar services		33%			ti hul d	44%			22%	

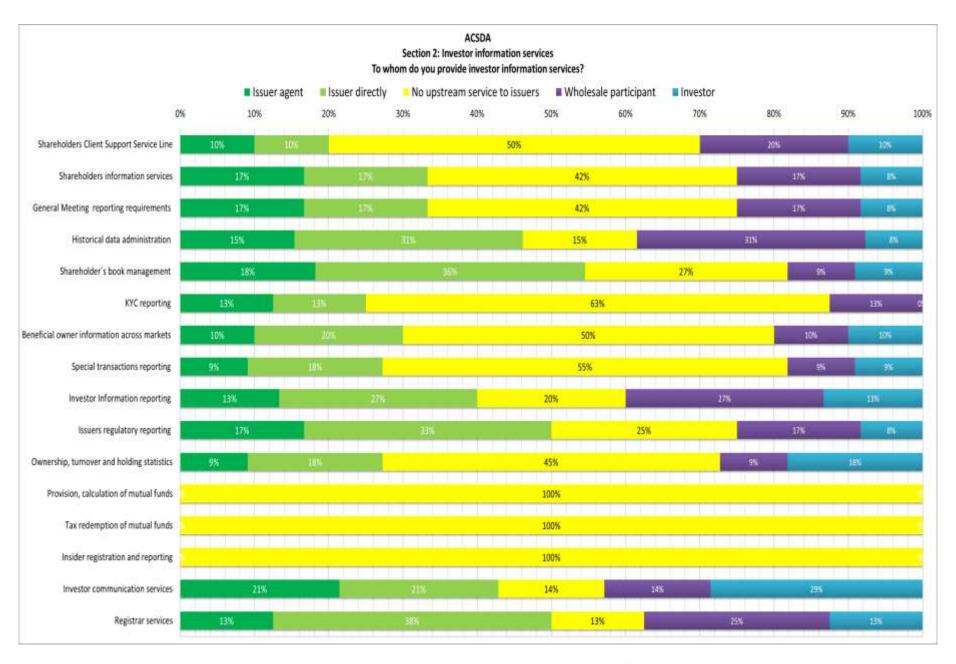






















Upstream (se	ervices betwe	een the CSI) and the issuer		ACSDA estor information nication interfact		our customers on	investor informa	ation services?		
				Web Propri	etary SWIFT S	Other N/A					
0%		10%	20%	30%	40%	50%	60%	70%	80%	90%	100
Shareholders Client Support Service Line		25%	0	8			75%				
Shareholders information services		22%		11% 0%				57%			
General Meeting reporting requirements	13%		13% 0	6			75%				
Historical data administration	13%			38%		O <mark>X</mark>		50%	5		
Shareholder's book management 🛛 🕅			38%		0%			63%			
KYC reporting	11%		22%	0%	11%			56%			
eneficial owner information across markets 👸		25%	0	5			75%				
Special transactions reporting	10%		20%	0%			70%	2			
Investor Information reporting	10%		30	%	0% 1)%		50%	\$		
Issuers regulatory reporting	10%		20%	0%	20%			50%	6		
Ownership, turnover and holding statistics		25%	Û	8			75%				
Provision, calculation of mutual funds						100%					
Tax redemption of mutual funds						100%					
Insider registration and reporting	11%		11% 0%				78%				
Investor communication services	18				45%		0%	18%		18%	
Registrar services	18		-		45%		0%	9%		27%	









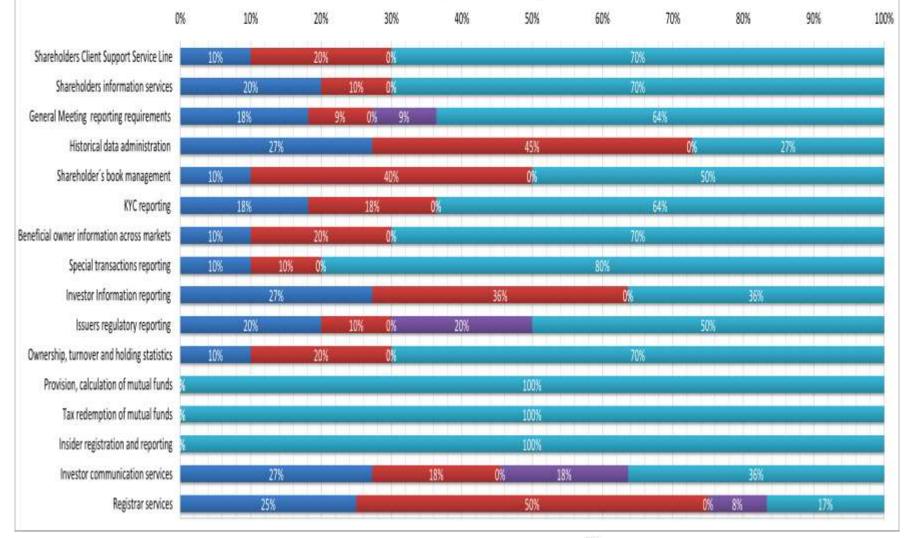


ACSDA

Section 2: Investor information services

Downstream (services between the CSD and the issuer): Which communication interfaces do you offer your customers on shareholder information services?

Web Proprietary SWIFT Other N/A





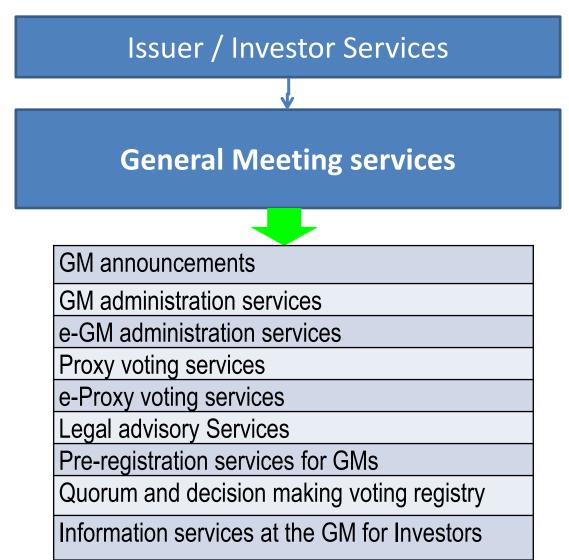












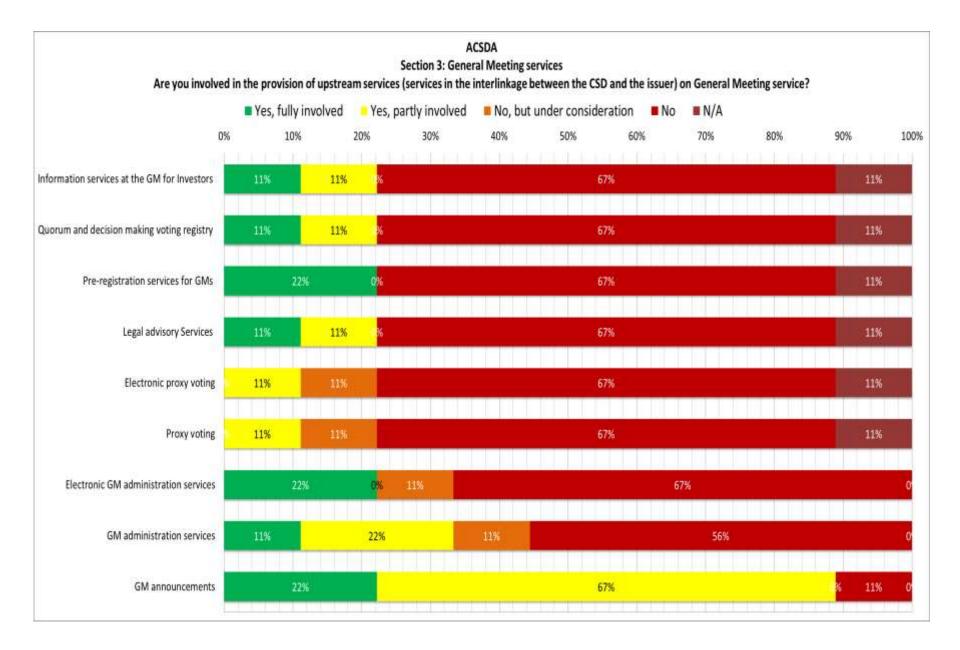






















			A Section 3: Gene	CSDA ral Meeting ser	vices					
Are you involved in	the provision of do	ownstream servic	es (services in th	e interlinkage b	etween the CSI	D and investors	on General N	leeting services?		
	Yes, fully invo	olved 📒 Yes, p	partly involved	No, but u	nder considera	ation 📕 No	N/A			
0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100
nformation services at the GM for Investors	11%	11% %			67	¥.			11%	
Quorum and decision making voting registry	11%	11% %			67)	¥			11%	
Pre-registration services for GMs	22%	0 <mark>%</mark>			67	X			11%	
Legal advisory Services	22%	<mark>s</mark> x.			67)	¥			11%	
Electronic proxy voting	22%		11%			6	7%			0
Proxy voting	22%		11%			6	7%			0
Electronic GM administration services	22%	0 <mark>%</mark>	11%			56%			11%	
GM administration services	11%	22%		11%		. (4	4%		11%	
GM announcements		33%				56%			% 11%	0











Which	n of following Gene		neral Meeting ices do you offe		y or optional se	rvices?			
		Obligatory	/ Optional	N/A					
	10% 20%	30%	40%	50%	60%	70%	80%	90%	100
11%					89%				
11%					89%				
11%	11%				78%				
11%					89%				
11%	11%				78%				
11%	11%				78%				
					1000				
1176	11%				10%			224	
	11% 11% 11%	10% 20% 11% 11% 11% 11% 11% 11% 11% 11% 11% 11%	 Obligatory 10% 20% 30% 11% 	IO% 20% 30% 40% I1% 11% 11% 11% I1% 11% 11% 11%	Obligatory Optional N/A 10% 20% 30% 40% 50% 11% 11% 1 1 1 11% 11% 1 1 1 11% 11% 1 1 1 11% 11% 1 1 1 11% 11% 1 1 1 11% 1 1 1 1 11% 1 1 1 1 11% 1 1 1 1 1	Obligatory Optional N/A 10% 20% 30% 40% 50% 60% 11% 89% 89% 89% 89% 11% 11% 89% 89% 11% 11% 89% 78% 11% 11% 78% 78% 11% 11% 78% 78% 11% 11% 78% 78% 11% 11% 78% 78%	Obligatory Optional N/A 10% 20% 30% 40% 50% 60% 70% 11% 89% 89% 89% 89% 11% 89% 11% 11% 78% 78% 11% 78% 11% 11% 78% 78% 11% 78% 11% 11% 78% 78% 11% 78%	Obligatory Optional N/A 10% 20% 30% 40% 50% 60% 70% 80% 11% 89% 11% 89% 11%	Obligatory Optional N/A 10% 20% 30% 40% 50% 60% 70% 80% 90% 11% 89% 89% 11% 89% 11%











		To whom o		ACSDA eneral Meeting se General Meeting i		ices?				
Issu	er agent 📕	Issuer directly	No upstrea	am service to iss	uers 📕 Who	lesale participa	nt 📕 Inves	itor		
0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100
Information services at the GM for Investors	11%	11%			56%			11%	11%	
Quorum and decision making voting registry	11%	11%			56%		_	11%	11%	
Pre-registration services for GMs	11%	11%		445	6		11%		22%	
Legal advisory Services	11%	11%			56%			11%	11%	
Other					100%					8
Electronic proxy voting	14%	0		57%				14%	14%	
Proxy voting	14%	0		57%				14%	14%	
Electronic GM administration services	18%		18%		36%			18%	9%	6
GM administration services	11%	11%		449	6		11%		22%	
GM announcements		26%		22%	9%	1	26%		17%	

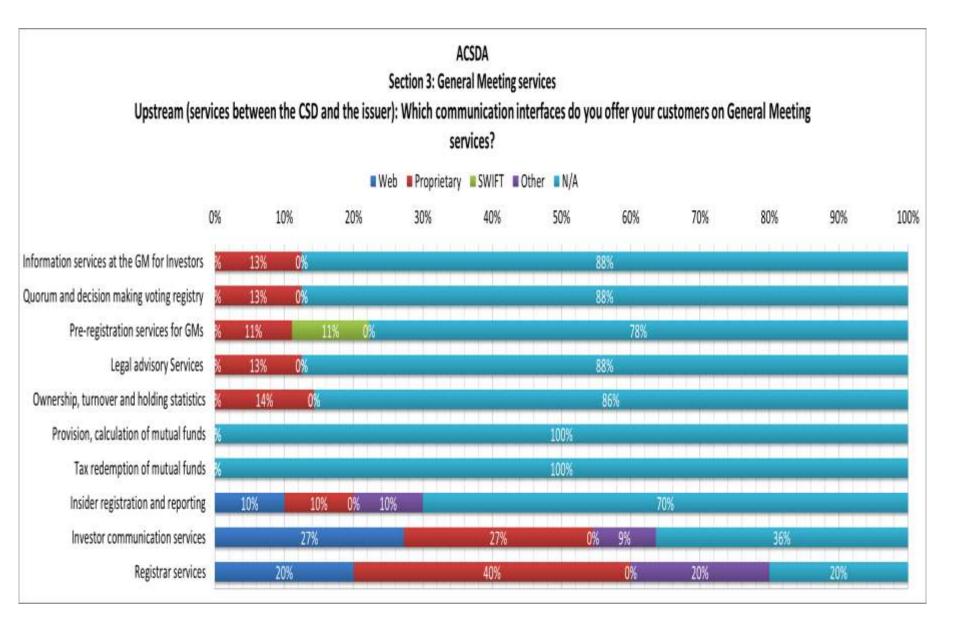






















Downstream (s	ervices	between the (S SD and the issue	ection 3: Gene r): Which com		-		ou offer your	customers or	n General Meet	ing	
			Web	Proprietary	SWIFT	Other	N/A					
	0%	10%	20%	30%	40%	5	50%	60%	70%	80%	90%	100%
Information services at the GM for Investors		11%	11% 0%				Гал Гал	78%				
Quorum and decision making voting registry		11%	11% 0%					78%				
Pre-registration services for GMs		11%	11%	11% 0%					67%			
Legal advisory Services		11%	11% 0%					78%			_	_
Ownership, turnover and holding statistics	5	13%	25%		0%				63%			
Provision, calculation of mutual fund	5 %					1	00%					
Tax redemption of mutual fund	5 %					1	00%					
Insider registration and reporting	8					1	00%					
Investor communication services	5	22%		22%		0%			56%			
Registrar service:	5		30%			4	10%		0%	30	%	























Are you involved in the pro	vision of upstre	Section 4: Other iss	ACSDA uer and investor service in the interlinkage betw		he issuer) on oth	er services?			
Yes, fully	involved	Yes, partly involved	No, but under co	onsideration	No N/A				
0%	10%	20%	30% 40%	50%	60%	70%	80%	90%	100%
Report on income Collection and payments distributions to beneficial owners	229	6 O <mark>X</mark>		56%				22%	
On line interest and payment calculation on managed and deposited securities		50%		0%		38%		1	3%
On line Securities issuance		44%		11%	8	33%			11%
Transfer Agent services			56%		11%	8	22%		11%
ETF management		33%	11%	8	33%			22%	
Historical data on issue administration		44%		11%	X	22%		22%	
Legal advisory and control management for special transactions	11%	11%		56%				22%	
Network management for dividend payments	225		22%	6	33%			22%	
Final beneficiary payments	229	61 O <mark>N</mark>		56%				22%	
REPO and Securities lending transactions handling		33%	0% 11%			44%			11%
Ex-date for dividend management		38%	0%		38%			25%	
Dividend calculation and reporting		50%		0%		38%		1	3%
Legal advisory services	11% 0			67%				22%	
Shareholders front office management	11%	11%		56%				22%	
KYC services for Shareholders book management	11% 0		56%				33	K	
Officially appointed mechanism (EC Transparency directive)		50%					50%		
National number agent (NNA)			67%			0% 11%		22%	
				100	~				





AMEDA

ACSDA

-s Der

Americas' Central Securit



Are you also involved	d in downstrea		tion 4: Other issu			and investors) o	n other service:	2 2			
Yes, fu	lly involved	Ves, p	artly involved	No, bu	t under consider	ation No	N/A				
09	N 1	10%	20%	30%	40%	50%	60%	70%	80%	90%	100
Report on income Collection and payments distributions to beneficial owners		25%	0%			50%				25%	
On line interest and payment calculation on managed and deposited securities		25%		13%	×	25%			38%		
On line Securities issuance		29%		0%	29%				43%		
Transfer Agent services		3	3%		11% %		33%			22%	
ETF management	14%		14%	*	29%				43%		
Historical data on issue administration		25%		13%	8	25%			38%		
Legal advisory and control management for special transactions	13%	0%			63%					25%	
Network management for dividend payments		25%		13%	ĸ	38	%			25%	
Final beneficiary payments		25%	0%			50%				25%	
REPO and Securities lending transactions handling	1 1 1 1		43%			14%	14%		14%	143	
Ex-date for dividend management		22%		11% 8		33%			33%	5	
Dividend calculation and reporting	1111	1 1 1 1	38%		0%	38	%			25%	
Legal advisory services	13%	0%			63%					25%	
Shareholders front office management	13%		13%	1111		50%		TITT		25%	
KYC services for Shareholders book management	K			63%					38%		
Officially appointed mechanism (EC Transparency directive)		1 1 1 1	50%					ŝ	%		
National number agent (NNA)			3%	00	22%			50	44%		
Marional Indition agent (MMM)		,	576	0%	2270				4475		









				ACSDA ner issuer and inv							
	Whi	ch of follow	ring other issuer ser			r optional services	(
			Obligation	tory Option	al <mark>N/A</mark>						
0	%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Report on income Collection and payments distributions to beneficial owners	4	20%					80%				
On line interest and payment calculation on managed and deposited securities	11%		11%				78%				
On line Securities issuance		22%		22%				56%			
Transfer Agent services		22%		11%				67%			
ETF management	11%			44%					44%		
Historical data on issue administration	8		44%					56%			
Legal advisory and control management for special transactions			33%			33%	1		33%		
Network management for dividend payments	8	22%					78%				
Final beneficiary payments	11%			33%				56%			
REPO and Securities lending transactions handling	11%		11%				78%				
Ex-date for dividend management		22%			33%				44%		
Dividend calculation and reporting	11%		22%					67%			
Legal advisory services			33%		11%			56%			
Shareholders front office management	8 11%					8	9%				
KYC services for Shareholders book management	11%		11%				78%				
Officially appointed mechanism (EC Transparency directive)	8 11%					8	9%				
National number agent (NNA)	135	6 0					88%				











			ACSDA Section 4: Other issuer and investor To whom do you provide other se						
	Issuer agent	Issuer directly	No upstream service to issue	rs 🛛 🖩 Wholesale participant	t Investor				
05	10%	20%	30% 4	Ni 50%	60%	70%	80%	90	15 10
Report on income Collection and payments distributions to beneficial owners	17%		17%	33%			17%		178
On line interest and payment calculation on managed and deposited securities	9%	18%		45%			5%		18%
On line Securities issuance	10%	26%		40%			10%	21	ĸ
Transfer Agent services	17%		17%	33%			17%		17%
ETF management	15%		- 315		23%		15%		15%
Historical data on issue administration	18%		18%	36%			189	i i	9%
Legal advisory and control management for special transactions	10%		40%		20%		20%		10%
Network management for dividend payments	10%	20%		50%				10%	10%
Final beneficiary payments	15%		ilk		23%		15%		15%
REPO and Securities lending transactions handling	9%	18%		45%			<u>%</u>		18%
Ex-date for dividend management	8%	8%	33%			42%			8%
Dividend calculation and reporting	10%	20%		40%			20%		10%
Legal advisory services	8%	25%	8	33%			25%		5 %
Shareholders front office management	10%	10%		60%				10%	10%
KYC services for Shareholders book management	14%			71%				X	165
Officially appointed mechanism (EC Transparency directive)				100%					
National number agent (NNA)	11%	115		56%				11%	11%











ACSDA

Section 4: Other issuer and investor services

Upstream (services between the CSD and the issuer): Which communication interfaces do you offer your customers on other services?

Web Proprietary SWIFT Other N/A

(0%	10	0%	20%	30	0% 4	0%	50%	6	50%	70%	80%	90%	100%
ervices	%							100%		le i de le				
owners	%							100%					deris district	0
curities	%	20% 0%							6	10%				
suance	%		25%		0%					75%				
ervices		13%			25%	0%	13%				50	%		
gement		14%		14	% 0%					71%				
tration	%				50%			0%	13%			38%		
actions	%			43	%		0%			10	57%			-
ments	ж	-			50%	and the second second		0%			50	1%		
ments	%	13%	0%	13%			-			75%		-		
andling	%			44	1%			11%	0%			44%		
ement	%	13%	0%	13%						75%				
oorting		13%		13%	0%					75%				
ervices		13%			25%	0%					63%			
ement		13%			25%	0%	13%			10	50	%		
ement	%	13%	0%						88%					
rective)	%	13%	0%						88%	11				
t (NNA)	%	13%	0%		_				88%					

Other Ser Report on income Collection and payments distributions to beneficial or On line interest and payment calculation on managed and deposited second On line Securities issu Transfer Agent se **ETF** manage Historical data on issue administr Legal advisory and control management for special transaction Network management for dividend payn Final beneficiary payn REPO and Securities lending transactions har Ex-date for dividend manage Dividend calculation and repo Legal advisory se Shareholders front office manage KYC services for Shareholders book manage Officially appointed mechanism (EC Transparency dire National number agent



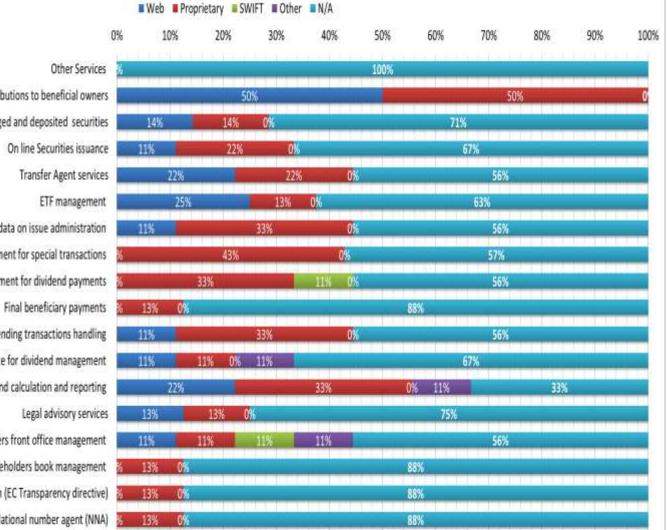






ACSDA Section 4: Other issuer and investor services

Downstream (services between the CSD and the investor): Which communication interfaces do you offer your customers on other issuer services?



Report on income Collection and payments distributions to beneficial owners On line interest and payment calculation on managed and deposited securities Historical data on issue administration Legal advisory and control management for special transactions Network management for dividend payments Final beneficiary payments REPO and Securities lending transactions handling Ex-date for dividend management Dividend calculation and reporting Shareholders front office management KYC services for Shareholders book management Officially appointed mechanism (EC Transparency directive) National number agent (NNA)



AECS





ALL CSD

- All instrument types are served including Equity, Money Market, ETFs, Fixed income.
- Manage Omnibus and Beneficial owner markets.
- <u>Corporate Actions Services</u>
 - Upstream : Mostly Mandatory 64%, Voluntary 57%, Payments 89%, Cross Border 59%
 - Downstream : Mostly Mandatory 55%, Voluntary 52%, Payments 54%, Cross Border 44%
 - For all services, they are provided mainly to the issuer directly, then to the wholesale participant and then the investor
 - Interfaces Used Upstream and downstream: mainly Proprietary. Also Web and SWIFT are the ones offered to customers
- Investor Information Services:
 - Common Services: Main services Ownership turnover and holding statistics, KYC reporting, Issuer regulatory report, registrar services
 - Provided mainly to the issuer directly and investors
 - Interfaces: Mainly proprietary and web
- General Meeting Services
 - Not very common. Many CSDs are thinking to enter into this business

Other Services

- Many CSDs offer value added services Upstream and Downstream: Most common services are: dividend calculation and reporting, Ex-date for dividend management, historical data on issue administration, Legal advisory and control management for special transactions are provided mainly to the Issuer directly, as well as to the investors
- Interfaces used: Mainly proprietary.

Account Structure- Beneficial Owner

- All instrument types are served including Equity, Money Market, ETFs, Fixed income
- Manage Beneficial Owner markets
- <u>Corporate Actions Services</u>
 - Upstream: Mostly Mandatory 91%, Voluntary 80%, Payments 78%, Cross Border 50%
 - Downstream: Mostly Mandatory 71%, Voluntary 69%, Payments 71%, Cross Border 47%
 - For all services, they are provided mainly to the issuer directly, then the issuer agent and then to investor
 - Interfaces Used Upstream and downstream: mainly Proprietary. Also Web and SWIFT are the ones offered to customers
- Investor Information Services:
 - Common Services: Main services Issuers regulatory report, Ownership turnover and holding statistics, KYC reporting, registrar services
 - Provided mainly to the issuer directly and investors
 - Interfaces : Mainly proprietary and web
- General Meeting Services
 - Not very common. Many CSD are thinking to enter into this business
- Other Services
 - Many CSD offer value added services Upstream and Downstream: Most common services are: Dividend calculation and reporting, Legal advisory and control management, National Numbering Agent (NNA), Historical data on issue administration, Ex-date for dividend management, REPO and Securities lending transactions handling are provided mainly to the Issuer directly, as well as to the investors
 - Interfaces used: Mainly proprietary

ACG

- All instrument types are served including Equity, Money Market, ETFs, Fixed income
- Manage Omnibus and Beneficial Owner markets
- <u>Corporate Actions Services</u>
 - Upstream: Mostly Mandatory 92%, Voluntary 65%, Payments 66%, Dividend Payments 50%
 - Downstream: Mostly Mandatory 75%, Voluntary 75%, Payments 65%, Dividend Payments 57%
 - For all services, they are provided mainly to the investor, and then to the issuer directly, and then the issuer agent
 - Interfaces Used Upstream and downstream: mainly Proprietary. Also SWIFT and web are the ones offered to customers
- Investor Information Services:
 - Common Services: Main services Issuers regulatory reporting and general meeting reporting requirements, follow by KYC reporting and ownership turnover and holding statistics, provided mainly to the issuer directly and the investors
 - Provided mainly to the Wholesale participant, issuer directly and issuer agent
 - Interfaces: Mainly proprietary and web
- **General Meeting Services**
 - Not very common. Many CSDs are thinking to enter in to the business
- Other Services
 - Many CSD offer value added services Upstream and Downstream: Most common services are: Ex-date for dividend manager, final beneficiary payments, legal advisory and control management for special transactions, historical data on issue administration, shareholders front office management
 - Services are provided mainly to the Issuer and to the issuer agent, as well as to the wholesale participant and the investor
 - Interfaces used: Mainly proprietary

AECSD

- All instrument types are served including Equity, Money Market, ETFs, Fixed income
- Manage Omnibus and Beneficial Owner markets
- <u>Corporate Actions Services</u>
 - Upstream : Mostly Mandatory 89%, Voluntary 80%, Payments 80%, Dividend Payments 40%
 - Downstream : Mostly Mandatory 67%, Voluntary 67%, Payments 50%, Dividend Payments 30%
 - For all services, they are provided mainly to the investor, and then to the issuer directly, and then the issuer agent
 - Interfaces Used Upstream and downstream: mainly Proprietary . Also SWIFT and web are the ones offered to customers
- Investor Information Services:
 - Common Services: Main services share holders information services, ownership turnover and holding statistics, registrar services provided mainly to the issuer directly and issuer agent
 - Provided mainly to the investors, issuer directly and issuer agent
 - Interfaces: Mainly proprietary and web
- General Meeting Services
 - Not very common. Many CSDs are thinking to enter in to the business
- Other Services
 - Many CSDs offer value added services Upstream and Downstream: Most common services are: Historical data on issue administration, dividend calculation and reporting, National Numbering Agency (NNA) and REPO and Securities lending transaction handling
 - Services are provided mainly to the Issuer and to the issuer agent, as well as to the issuer directly
 - Interfaces used: Mainly proprietary

AMEDA

- All instrument types are served including Equity, Money Market, ETFs, Fixed income.
- Manage Omnibus and Beneficial Owner markets
- <u>Corporate Actions Services</u>
 - Upstream: Mostly Mandatory 100%, Voluntary 100%, Payments 88%, Cross Border 63%
 - Downstream: Mostly Mandatory 63%, Voluntary 51%, Payments 63%, Cross Border 50%
 - For all services, they are provided mainly to the issuer directly, then to the issuer agent and then the investor
 - Interfaces Used Upstream and downstream: mainly Web. Also SWIFT and Proprietary are the ones offered to customers
- Investor Information Services:
 - Common Services: Main services Investor Information reporting, special transaction reporting, shareholder book management, historical data administration, general meeting reporting requirements.
 - Provided mainly to the issuer directly and issuer agent
 - Interfaces : Mainly proprietary and web
- General Meeting Services
 - Not very common. Many CSD are thinking to enter in to the business
- Other Services
 - Many CSD offer value added services Upstream and Downstream: Most common services are: Online securities issuance, final beneficial payments, REPO and Securities lending transactions handling, dividend calculation and reporting, Ex-date for dividend management and National Numbering Agency (NNA) are provided mainly to the Issuer and to the issuer agent, as well as to the issuer directly
 - Interfaces used: Mainly proprietary

ECSDA

- All instrument types are served including Equity, Money Market, ETFs, Fixed income
- Manage Omnibus and Beneficial Owner markets
- <u>Corporate Actions Services</u>
 - Upstream: Mostly Mandatory 76%, Voluntary 88%, Payments 89%, Cross Border 53%
 - Downstream : Mostly Mandatory 77%, Voluntary 65%, Payments 77%, Cross Border 59%
 - For all services, they are provided mainly to the issuer directly, then to the wholesale participant and then the investor
 - Interfaces Used Upstream and downstream: mainly Web. Also SWIFT and proprietary are the ones offered to customers
- Investor Information Services:
 - Common Services: Main services Ownership, turnover and holding statistics, Issuer regulatory reporting, registrar services, investor communication services
 - Provided mainly to the issuer directly and investors
 - Interfaces : Mainly proprietary and web
- General Meeting Services
 - Not very common. Many CSD are thinking to enter in to the business
- Other Services
 - Many CSD offer value added services Upstream and Downstream: Most common ones are: National Numbering Agency (NNA), historical data on issue administration, dividend calculation and reporting and REPO and Securities lending transactions handling are provided mainly to the Issuer directly, as well as to the issuer agent
 - Interfaces used: Mainly proprietary

Account Structure- Omnibus

- All instrument types are served including Equity, Money Market, ETFs, Fixed income
- Manage Omnibus markets
- <u>Corporate Actions Services</u>
 - Upstream: Mostly Mandatory 86%, Voluntary 78%, Payments 78%, Cross Border 48%
 - Downstream: Mostly Mandatory 94%, Voluntary 89%, Payments 77%, Cross Border 57%
 - For all services, they are provided mainly to the issuer directly, then to the issuer agent and then the investor
 - Interfaces Used Upstream and downstream: mainly Proprietary. Also Web and SWIFT are the ones offered to customers
- Investor Information Services:
 - Common Services: Main services Issuers regulatory report, KYC reporting, Ownership turnover and holding statistics, registrar services, Shareholders book management
 - Provided mainly to the issuer directly and investors
 - Interfaces: Mainly proprietary and web
- General Meeting Services
 - Not very common. Many CSDs are thinking to enter into this business
- Other Services
 - Many CSDs offer value added services Upstream and Downstream: Most common services are: National Numbering Agent (NNA), Dividend calculation and reporting, Historical data on issue administration, Exdate for dividend management, REPO and Securities lending transactions handling are provided mainly to the Issuer directly, as well as to the investors
 - Interfaces used: Mainly proprietary.

ACSDA

- All instrument types are served including Equity, Money Market, ETFs, Fixed income.
- Mainly Beneficial Owner markets.

<u>Corporate Actions Services</u>

- Upstream: Mostly Mandatory 66%, Voluntary 78%, Cross Border 70%, Dividend Payments 33%
- Downstream: Mostly Mandatory 89%, Voluntary 89%, Cross Border 77%, Dividend Payments 38%
- For all services, they are provided mainly to the Wholesale participant, and then to the issuer directly, and then the investor
- Interfaces Used Upstream and downstream: Mainly Proprietary. Also SWIFT and web are offered to customers
- Investor Information Services:
 - Common Services: Investor information and regulatory reporting, followed by shareholders book management and historical data administration, provided mainly to the issuer and the issuer agent.
 - Provided mainly to the Investors, issuer directly and issuer agent
 - Interfaces: Mainly proprietary
- General Meeting Services
 - Not very common. Many CSDs are thinking to enter into this business
- Other Services
 - Many CSDs offer value added services Upstream and Downstream: Most common services are: On-line interest calculation, transfer agent services, historical data on issue administration, dividend calculation and reporting, National Numbering Agency
 - Services are provided mainly to the Issuer and to the issuer agent, as well as to the wholesale participant and the investor
 - Interfaces used: Mainly proprietary