

J c b '9I W` `ni '9ZZ]n]Ybn. '7 c b h f c ` `]b [ 'a ]h  
F ; ' : ]b Ub W` ; a V < 'b Yi 'X Y b \_ Y b

9fZU\ fYb 'G]Yž'k Ufi a 'F c V Y f h ; ]Y V Y b f U h \ 'j c b 'F ; ' : ]b Ub W`  
; a V < '9I W` `Z0f'XUg'7 c b h f c ` `]b [ 'U V `Y \ b h i b X 'k Y `W` Y  
d f c Z Y g g ]c b Y `Y b '@0gi b [ Y b 'Y g' [ ]V h "

< U b b c j Y f 'f c h g k

5`g' l b h Y f b Y \ a Y b 'k A W` g h ž ' \_ c a a h 'X Y f 'A c a Y b h ž ' ]b 'X Y a 'X ]Y  
B i h n i b [ 'j c b 'A ]W f c g c Z h '9I W` `b ]W` h 'a Y \ f 'U i g f Y ]W` h ž ' i a 'U `Y  
Z ]b U b n ]Y `Y b '5 g d Y \_ h Y 'Y Z Z ]n ]Y b h 'n i 'g h Y i Y f b " 'F c V Y f h ; ]Y V Y b f U h \ ž  
; Y g W` A Z h g Z 0 \ f Y f 'X Y f 'F ; ' : ]b Ub W` ; a V < ž'g ]Y \ h'g ]W` 'a ]h 'X ]Y g Y f  
< Y f U i g Z c f X Y f i b [ 'h A [ ' ]W` ' \_ c b Z f c b h ]Y f h " G Y ]b 'l b h Y f b Y \ a Y b 'V ]Y h Y h  
Y l h Y f b Y g' : ]b Ub n a Ub U [ Y a Y b h 'U b ž i b X '9I W` `k ]f X ]b 'X ]Y g Y a  
? c b h Y l h'g W` b Y ` `n i 'Y ]b Y a 'F ]g \_ c " '8 c W` 'k U f i a 'g c ` `h Y b  
l b h Y f b Y \ a Y b 'U i Z 'g d Y n ]Y `Y '7 c b h f c ` `]b [ ! G c Z h k U f Y 'i a g h Y ] [ Y b 'i b X  
k Y `W` Y 'J c f h Y ]Y 'V f ]b [ h 'X ]Y g 'a ]h'g ]W` 3

9I W` `]g h 'Y ]b Y 'X Y f 'U a 'k Y ]h Y g h Y b 'j Y f V f Y ]h Y h Y b 'G c Z h k U f Y `0gi b [ Y b  
]b 'X Y f ; Y g W` A Z h g k Y 'h " '9g' ]g h 'V Y b i h n Y f Z f Y i b X ' ]W` ž i b X 'j ]Y `Y  
l b h Y f b Y \ a Y f ` \ U V Y b 'g ]W` ' ]a '@U i Z Y 'X Y f 'A \ f Y 'a ]h'g Y ]b Y b  
: i b \_ h ]c b Y b 'j Y f h f U i h [ Y a U W` h " '8 Y b b c W` ' [ ]V h 'Y g' [ f U j ]Y f Y b X Y  
G W` k A W` Y b ž 'X ]Y 'g ]W` ' ]b g V Y g c b X Y f Y 'V Y ]'k U W` g Y b X Y a  
8 U h Y b j c 'i a Y b 'i b X 'n i b Y \ a Y b X ' \_ c a d 'Y l Y f Y b '6 Y f Y W` b i b [ Y b  
V Y a Y f \_ V U f 'a U W` Y b " @U i h 'F c V Y f h ; ]Y V Y b f U h \ ' ]g h 'Y ]b 'l a g h ]Y [ 'U i Z  
'Y ]g h i b [ g Z A \ ] [ Y f Y 'G c Z h k U f Y 'i b i a [ A b [ ' ]W` ž i a ' : Y \ Y f 'n i  
j Y f a Y ]X Y b 'i b X 'X ]Y '9 Z Z ]n ]Y b n 'n i 'g h Y ] [ Y f b "

8 ]Y ; f Y b n Y b 'j c b 'A ]W f c g c Z h '9I W` `

9]b 'n Y b h f U `Y g 'D f c V `Y a ž 'X U g 'X ]Y 'B i h n i b [ 'j c b '9I W` `V Y h f ]Z h ž ' ]g h 'X ]Y

: Y\`YfUbZÄ`][ \_Y]hž`X]Y`Xi fW`a Ubi Y`Y`8UhYbY]b[ UVY`YbghY\`h"  
6Y]`[ fc»Yb`8UhYba Yb[ Yb`cXYf`k Ybb`ðZcfa Uh]cbYb`]b`a Y\`fYfYb  
HUVY`Yb`VYbÖh][ h`k YfXYbž`ghY][ h`X]Y`K U\`fgWXY]b`]W`\_Y]h`ZØf  
: Y\`Yf`a Ugg]j`Ub"; ]YVYbFUh\`VYf]W`hYhj`cb`Y]bYa`U`\_hi Y`Yb`: U`  
Y]bYg`9!7ca`a YfW`!`bhYfbY\`a Ybgž`XYggYb`6i W\`U`hi`b[ gZ\`Yf  
Y]bY`[ YZÄ\`f]W`Y`i bhYfXYW`\_i b[ `j`cb`+`\$`\$\$\$`9i`fc`ni`f`:`c`[ Y`\`UhhY"  
8]YgY`G]hi Uh]cb`k Uf`Ui ZY]bYb`:`cfa Y`ZY\`Yf`]b`; cc[ `Y`G\`YYhg  
ni fØW`\_ni ZØ\`fYbž`XYa`:`; cc[ `Y!DYbXUbh`ni`9i W`"

9]b`k`Y]hYfYg`F]g]\_c`Ui`g`XYf`5V\`Äb[ ][\_Y]hj`cb`9i W`"]gh`X]Y  
a`Ö[ `]W`Y`i`bYfgYh`]W`\_Y]hj`cb`A`]hUfVY]hYfbž`X]Y`X]Y  
8UhYbj`Yfk`U`hi`b[ `ØVYfbY\`a`Yb`"K`Ybb`bi`f`Y]bY`DYfgcb`a`]h  
gdYn]Y`Yb`?Yb`hb]ggYb`Ub`XYb`:`]Yb`UfVY]hYhž`VYghY\`h`X]Y`:`Y`ZU\`fž  
XUgg`XUg`i`bhYfbY\`a`Yb`]b`G`W`k`]Yf][ \_Y]hYb`[ YfÄhž`k`Ybb`X]Y]gYf  
A`]hUfVY]hYf`Ui`ggW`Y]XYh`c`XYf`\_f`Ub`\_`k`]fX`"8]Y`\_ca`d`Yi`Yb`:`cfa`Y`b  
i`b`X`a`Ubi`Y`Y`Dfc`nYggY`a`UW`Yb`XYb`[ YgUa`hYb`J`cf[ Ub[ `UbZÄ`][  
ZØf`A`]gg[ YgW`]W`\_Y"

### K Ubb`gc`hY`a`Ub`i`a`ghY][ Yb3

8Yf`f]W`h][ Y`NY]hdi`b`\_h`ZØf`XYb`K`YW`gY`ni`d`fcZYgg]cbY`Yb  
7cb`hfc`][ b[ `!Hcc`g`]gh`\`Äi`Z][ `gW`k`Yf`ni`Yf`\_YbbYb`"@Ui`h`F`c`VYf`h  
; ]YVYbFUh\`gc`hYb`i`bhYfbY\`a`Yb`gdÄhYghYbg`VY]a`9ffY]W`Yb  
Y]bYg`a`cbUh]W`Yb`i`a`gUhnYg`j`cb`%\$\$\$`\$\$\$`9i`fc`ØVYf`X]Y  
ðj`Ygh]h]cb`]b`gdYn]U`]g]YfhY`Gc`Zhk`UfY`b`UW`XYb`\_Yb`"8]YgY  
Dfc[ fUa`a`Y`V]YhYb`:`i`b`\_h]cbYbž`X]Y`9i`W`"gW`]W`hk`Y[ `b]W`h  
`Y]ghYb`\_Ubb``j`cf`U`Ya``]b`XYf`5i`hca`Uh]g]Yfi`b[ `i`b`X  
8UhYb]bhY[ f]hÄh"

; ]YVYbFUh\`gdf]W`hj`cb`XYf`A`Ö[ `]W`\_Y]hž`a`]h`d`fcZYgg]cbY`Yb  
7cb`hfc`][ b[ `!@Øgi`b[ Yb`b]W`h`bi`f`X]Y`9Z]n]Ybn`ni`ghY][ Yfbž`gcbXYfb  
Ui`W`"Ub[ Zf]gh][ `?cghYb`ni`gYb`\_Yb`"8Ybb`gc`VU`X`Y]bZUW`Yf`ni  
bi`hnYbXY`Gc`Zhk`UfY`]a`d`Ya`Ybh]Yfh]ghž`\_ÖbbYb`F`Yggci`fW`b`VYggYf  
[ Ybi`mh`i`b`X`:`Y\`Yfei`Y`Yb`a`]b]a`]Yfh`k`YfXYb`"8]Yg`ZØ\`fh]b`XYf  
F`Y[ Y`ni`Y]bYf`\_`UfYb`J`YfVYggYfi`b[ `XYf`VYhf]YV`]W`Yb`5V`Äi`ZY"

GY]bY`9fZU\`fi`b[ `nY][ hž`XUgg`i`bhYfbY\`a`Yf`c`Zh`n`Ö[ Yfbž`XYb  
K`YW`gY`ni`k`U[ Ybž`XU`X]Y`9]bUfVY]hi`b[ `]b`Y]bY`bYi`Y`Gc`Zhk`UfY

U`g`Ui Zk ÀbX)[ `i bX`\_ca d`YI `Ya dZi bXYb`k ]fX" `8cW`X]YgYf  
5i Zk UbX`]gh`a Y`f`U`g`[ YfYW`hZYfh][ hž`k Ybb`a Ub`X]Y`dcg]h]j Yb  
9ZY`\_hY`VYhfUW`hYh" `8]Y`F; ; : ]bUbW` ; a V< `i bhYfghØhnh  
I bhYfbY`a Ybž`X]YgYb` , VYf[ Ub[ `ni `VYk À`h][ Yb`i bX`Y]bY`Ui Z`]\fY  
6YXØfZb]ggY`ni [ YgW`b]hhYbY`@Øgi b[ `ni `Z]bXYb"

## 8 Yf`K Y[ `]b`X]Y`Ni \_i bZh`XYg`7cbhfc``]b[ g

FcVYfh; ]YVYbfUH`i bX`gY]b`HYUa `j cb`XYf`F; ; : ]bUbW` ; a V<  
g]bX`Ui ZX]Y`Cdh]a ]Yfi b[ `j cb` : ]bUbndfcnYggYb`gdYn]U`]g]Yfh"  
K À`fYbX`g]Y`U`g`YI hYfbY`7: Cg`ZØf`]\fY`?i bXYb`U[ ]YfYbž`Y`ZYb  
g]Y`I bhYfbY`a Yb`b]W`h`bi f`VY]`XYf`6i W`U`hi b[ ž`gcbXYfb  
[ YghU`hYb`Ui W`XUg` : ]bUbna UbU[ Ya Yb`h`YZZ]n]YbhYf" `G]Y`V]YhYb  
b]W`h`bi f`X]Y`9I dYfh]gY`ZØf`XYb`I a gh]Y[ `Ui Z`dfcZYgg]cbY`Yg  
7cbhfc``]b[ !GcZhk UfYž`gcbXYfb`\_Øa a Yfb`g]W`Ui W`i a `X]Y  
`Ub[ Z]gh][ Y` ðhY[ fUH]cb`i bX`GW`i `i b[ `XYg`DYfgcbU`g"

K Ybb`G]Y`X]Y`Ni \_i bZh`ÀfYg`I bhYfbY`a Ybg]a `6YfY]W`  
7cbhfc``]b[ `Ui ZY]b` \Ø`YfYg`B]j YUi `YVYb`k c`Yb`i bX`XUVY]`Ui Z  
YfZU`fYbY`DUfhbYf`gYhnYb`a ØW`hYbž`\_Ubb`F`cVYfh; ]YVYbfUH`  
ÀbYb`U`g`\_ca dYhYbhYf`5bgdfYW`dUfhbYf`ni f`GY]hY`ghY`Yb" `8Yf  
K YW`gY`ni `dfcZYgg]cbY`Yb`@Øgi b[ Yb`\_ØbbhY`XYf`YbhgW`Y]XYbXY  
GW`f]h`ZØf`XYb`9fZc`[ `ÀfYg`I bhYfbY`a Ybg`gY]b"

## K ]W`h][ Y`5gdY`\_hY`dfcZYgg]cbY`Y`Yf 7cbhfc``]b[ !GcZhk UfY

DfcZYgg]cbY`Y`7cbhfc``]b[ !GcZhk UfYg`V]YhYb`nU`fY]W`Y`J`cfhY]`Y  
]a `J`Yf[ `Y]W`ni `A ]W`cgcZh`9I W`" `Ni Yfgh`Yfa Ø[ `]W`Yb`g]Y`Y]bY  
Ui hca Uh]g]YfhY`8UhYbY]b[ UVY`i bX`!j YfUfVY]hi b[ ž`X]Y  
a YbgW`]W`Y` : Y`Yf`g][ b]Z]\_Ubh`fYXi n]Yfh" `5bk YbXYf`\_ØbbYb`]\fY  
NY]hi bX`F`Yggci fW`b`YZZ]n]YbhYf`bi hnYbž`]bXYa `g]Y`g]W`Ui Z`X]Y  
5bU`mgY`k ]W`h][ Yf`?YbbnU`Yb`ghUhh`Ui Z`a Ubi Y`Y`9]b[ UVYb  
\_cbnYbhf]YfYb" `Ni XYa ` \UVYb`j ]Y`Y`X]YgYf`Dfc[ fUa a Y`]bhY[ f]YfhY  
8Ug`VcUfXgž`X]Y`9W`hnY]h! , VYfV`]W`\_ØVYf`X]Y`Z]bUbn]Y`Y`  
; YgUa hU[ Y`Y]bYg`I bhYfbY`a Ybg`V]YhYb"

9]b`k Y]hYfYf`d`cg]hj Yf`5gdY`\_h]gh`X]Y`G`\_U`]YfVUf`\_Y]h`A ]h`Y]bYa  
dfcZYgg]cbY`Y`b`7`cbhfc``]b[ !Hcc``\_Ubb`Y]b`I bhYfbY\`a Yb`j ]Y`Y  
j YfgW]YXYbY`8UHBei Y`Yb`]bhY[ f]YfYbž`k Ug`Xi fW`X]Y  
: i b`\_h]cbU]h`Ah`j cb`9I W`c`Zhi a gh`AbX`]W`i bX`ZY`\`YfUbZ`][ `]gh`  
8]YgY`GcZhk UfY!GmghYa Y`Yfa Ò[ `]W]Yb`Yg`ni XYa ž`a ]h  
j YfgW]YXYbYb`Bi mYfb`ni gUa a Ybni UfVY]hYbž`c\`bY`XUgg`X]Y  
; YZU\`f`VYghY\`hž`XUgg`bZcfa Uh]cbYb`j Yf`cfYb`[ Y\`Yb`cXYf`]b  
gYdUfUfYb`9I W`!8c`\_i a YbhYb`j YfnYhY`h`k YfXYb"

## GhUh]gh]\_Yb`ni f`Bi hni b[ `j cb`7`cbhfc``]b[ ! GcZhk UfY

8]Y`5`\_nYd`h`Ub`n`d`f`c`Z`Y`g`g]`c`b`Y``Y`f`7`c`b`h`f`c``]`b`[ `!`G`c`Z`h`k` U`f`Y`g`h`Y][ `h  
\_`c`b`h]`b`i ]`Y`f`]W`U`b``@`U`i`h`Y]`b`Y`f`G`h`i`X]`Y`j`c`b`;`&`ž`Y]`b`Y`f`D`U`h`h`Z`c`f`a`Z`Ø`f`  
G`c`Z`h`k` U`f`Y`V`Y`k`Y`f`h`i`b[ `Y`b`ž`b`i`m`Y`b`a`]`h`h`Y`f`k`Y`]`Y`Y`h`k`U`\*`\*`i`i`X`Y`f`  
\_`Y]`b`Y`b`i`b`X`a`]`h`h`Y`gh`Ab`X]`g`W]`Y`b`i`b`h`Y`fb`Y`\`a`Y`b`g`d`Y`n]`U`]`g]`Y`f`h`Y`  
G`c`Z`h`k`U`f`Y`Ò`g`i`b[ `Y`b`Z`Ø`f`]\`f`:]`b`U`b`n`a`U`b`U[ `Y`a`Y`b`h``8]`Y`g`n`Y][ `hž`X`U`g`g`  
j`]`Y`Y`:]`f`a`Y`b`X]`Y`J`c`f`h`Y`]`Y`j`c`b`9`Z`n]`Y`b`n`i`b`X`;`Y`b`U`i`][ `\_Y]`hž`X]`Y`  
g`c`W]`Y`G`m`g`h`Y`a`Y`V]`Y`h`Y`b`ž`Y`f`\_`U`b`b`h`\`U`V`Y`b"

⊖`Y]`b`Y`f`I`a`Z`f`U[ `Y`j`c`b`8`Y`c]`h`h`Y`[ `U`V`Y`b`+`\$`i`i`X`Y`f`V`Y`Z`f`U[ `h`Y`b`  
I`b`h`Y`fb`Y`\`a`Y`b`U`b`ž`X`U`g`g`g]`Y`X]`Y`a`d`Y`a`Y`b`h]`Y`f`i`b[ `Y]`b`Y`f`  
]`b`h`Y[ `f]`Y`f`h`Y`b`:]`b`U`b`n`g`c`Z`h`k`U`f`Y`U`g`Y]`b`Y`V`Y`X`Y`i`h`Y`b`X`Y`J`Y`f`V`Y`g`g`Y`f`i`b[  
]\`f`Y`f`7`c`b`h`f`c``]`b[ !D`f`c`n`Y`g`g`Y`U`b`g`Y`\`Y`b``⊖`g`V`Y`g`c`b`X`Y`f`Y`\_`Y]`b`Y`f`Y`  
I`b`h`Y`fb`Y`\`a`Y`b`V`Y`f]`W]`h`Y`h`Y`b`j`c`b`Y]`b`Y`f`G`h`Y][ `Y`f`i`b[ `X`Y`f`9`Z`n]`Y`b`n`i`a`  
V]`g`n`i`)`\$`i`i`b`U`W]`X`Y`a`I`a`g`h]`Y[ `U`i`Z`d`f`c`Z`Y`g`g]`c`b`Y``Y`@`Ò`g`i`b[ `Y`b`"  
8]Y`g`Y`g][ `b]`Z]`U`b`h`Y`b`J`Y`f`V`Y`g`g`Y`f`i`b[ `Y`b`k`Y]`g`Y`b`U`i`Z`X]`Y`  
B`c`h`k`Y`b`X][ `\_Y]`h`\]`b`ž`g]`W]`j`c`b`\`Y`f`\_`Ò`a`a``]`W]`Y`b`D`f`c[ `f`U`a`a`Y`b`k`]`Y`  
9I`W`ni`i`Ò`g`Y`b`ž`]`b`g`V`Y`g`c`b`X`Y`f`Y`k`Y`b`b`X`U`g`I`b`h`Y`fb`Y`\`a`Y`b`k`Å`W]`g`h`  
i`b`X`\_`c`a`d`Y`I`Y`f`k`]`f`X"

## < YfUi gZcfXYfi b[ Yb`VY]a`K YW]gY`ni`bYi Yf GcZhk UfY

C`V`k`c`\`X`Y`f`I`a`g`h]`Y[ `U`i`Z`d`f`c`Z`Y`g`g]`c`b`Y``Y`7`c`b`h`f`c``]`b[ !G`c`Z`h`k`U`f`Y`j`]`Y`Y`  
J`c`f`h`Y`]`Y`V]`Y`h`Y`hž`V`Y`gh`Y`\`Y`b`U`i`W]`<`Y`f`U`i`g`Z`c`f`X`Y`f`i`b[ `Y`b`ž`X]`Y`  
I`b`h`Y`fb`Y`\`a`Y`b`V`Y`X`Y`b`\_`Y`b`g`c``h`Y`b``9]`b`Y`X`Y`f`[ `f`Ò`h`Y`b`<`Ø`f`X`Y`b`]`g`h`X]`Y`

9]bUfVY]hi b[ gd\UgY"8 Ug[ Yk c\bhY'9I W\!GmghYa 'V]YhYh'Y]bY  
\c\Y'J YfhfUi h\Y]hzi bX'XYf'K YW\gY`ni 'Y]bYa 'bYi Yb'GmghYa  
\_Ubb'UbZAb[ `]W\ØVYfk Å`h][ YbX'k ]f\_Yb"8 Ug'HfU]b]b[ 'XYf  
A ]hUfVY]hYf'i bX'X]Y'5b[ Yk Ø\bi b[ 'Ub'byi Y': i b\_h]cbYb'YfZcfXYfh  
NY]hi bX'FYggci fW'b"

Ni gÅhn`]W\`a ØggYb`l bhYfbY\`a Yb`g]W\YfghY`Ybž'XUgg'X]Y`bYi Y  
GcZk UfY`ni `]\fYb`gdYn]Z]gW\Yb`6YXØfZb]ggYb`dUggh"9]bY  
i bdUggYbXY`@Øgi b[ `\_Ubb`\_cghgd]Y`][ `k YfXYb`i bX'X]Y  
VYhf]YV`]W\Yb`5V`Åi ZY`Y\Yf`VY\]bXYfb`U`g`ZØfXYfb"8Ygk Y[ Yb`]gh  
Yg`YbhgW\Y]XYbXž'XUgg`l bhYfbY\`a Yb`VY]'XYf`5i gk U\`Y]bYf  
bYi Yb`7cbhfc``]b[ !GcZk UfY`gcf[ ZÅ`h][ `j cf[ Y\Yb`i bX`gck c\  
]bhYfbY`U`g`Ui W\`YI hYfbY`9I dYfh]gY`\]bni n]Y\Ybž'i a`X]Y  
VYgha Ø[ `]W\Y`9bhgW\Y]Xi b[ `ni`hfYZZYb"

A ]h'XYf`f]W\h][ Yb`J cfVYfY]hi b[ `i bX`l bhYfghØhni b[ `YXcW\`k YfXYb  
X]Y`UbZAb[ `]W\Yb`<YfUi gZcfXYfi b[ Yb`cZhfUgW\`Xi fW\`X]Y`j ]Y`Yb  
J cfhY]Y`ØVYfhfcZZYbž'X]Y`Y]bY`a cXYfbY`7cbhfc``]b[ !@Øgi b[ `V]YhYb  
\_Ubb"

8YhU]`g

6Ygi W\Yb`G]Y`i bg`Ui Z.`X]Y!bUW\ f]W\hYb"bYh